

**MODERN
EQUIPMENT
FOR MODERN
CONDITIONS**

See Advert Page 2



**ON THE
BOEING 707
TO
NEW YORK**

See Page 11

VOL. LXXX No. 2066

[Registered at the G.P.O.
as a newspaper]

LONDON, NOVEMBER 1, 1958

PRICE NINEPENCE

CURRENT TOPICS

Ending of Compulsory Arbitration

IT is difficult to appreciate the Government's decision to allow the Industrial Disputes Order, with its compulsory arbitration, to lapse. It has indeed been made in spite of the opposition of the T.U.C., and in spite also of the employers' suggestion that the machinery should be continued for those industries in which both the employers' organisation and the trade unions wished to use it. Protesting against the decision the T.U.C. asserts that the Industrial Disputes Tribunal has given wide satisfaction and that there have been only minor differences between the British Employers' Confederation and themselves on the procedure for obliging all employers in an industry to abide by its jointly agreed conditions of work. For its part the Confederation states that its suggestions had been unacceptable to the T.U.C., which had put forward no alternative proposal except that the present arrangements should be continued without modification; hence the Minister of Labour had no course open to him other than the one he had taken. This apparently has been prompted by the desire to abolish all wartime controls. But it is questionable whether the community will benefit. There must have been many cases where compulsory reference of disputes to the Tribunal and legal enforcement of its decisions have been to the general advantage. Last year the Tribunal issued 113 awards, bringing the total since it was constituted in August, 1951, to 1,051. There remains, of course, the Industrial Court, which issued 40 awards last year. Set up under the Industrial Courts Act of 1919 it fulfils voluntary arbitration and its decisions are not legally enforceable. Beyond this, the Minister will still have the power to order committees of investigation or courts of inquiry into disputes which are of national importance. However, compulsory arbitration has at times been necessary and advisable, and it is unfortunate that its discontinuance should apparently have been dictated by political prejudice.

Giving Railways New Lease of Life

IN his paper to the North Eastern Region Lecture and Debating Societies at York, Mr. F. L. Hick, assistant operating officer of that region, painted a clear picture of the possible advantages of diesel traction, some of which is reflected in the abstract of his paper reproduced on page 13. He was careful to stress the unremitting drive towards cost reduction that must accompany attempts to obtain a greater volume of business on the railways and to underline the need to drop unremunerative activities. His well-balanced picture included the observation that stock for the Hull-Liverpool intercity service will represent an investment of about £1 million, so that quite a lot of traffic was needed to meet interest and depreciation charges over and above working costs. He thought a leaf might be taken out of the theatre agency book so that the higher-priced or first-class seats were sold first on such trains, especially at the railways' own reservation offices. Another timely reminder was that although 20 diesel locomotives can replace 30 steam and the maintenance cost per engine-mile may be two to three in favour of the diesel, the first cost of a Class 4 diesel may be £107,000 against £90,000 for a comparable electric unit or £35,000 for a steam locomotive, so that the necessity of getting better utilisation becomes paramount. The railway needs not only technical knowledge but that every man-jack should make a keen and full contribution to the railway cause if it is to have a new lease of life.

An Unexpected Appearance

THE appearance of the Summary of Annual Reports of the Traffic Commissioners for the Year Ended March 31, 1958, shows a most welcome acceleration in the production of this publication (H.M. Stationery Office, price 3s. 6d.) since it is considerably less than a year since the appearance of the previous summary. It

must be said that analysis of the reports from the various areas tends to make the reader slightly gloomy. Most traffic commissioners report declines in traffic among operators, and the pruning of services in off-peak periods and on Sundays. The degree to which there has been actual withdrawal of entire routes would seem to vary as between areas, and it is in any case a little difficult to estimate the effect, since, for example, in the Eastern area where 57 stage and 33 express services were withdrawn, facilities were either provided by other services over the routes, or were no longer needed, save in the case of seven stage and four express services. Inevitably, there are many references to the introduction of large-capacity one-man buses and the York-

containing a series of bus stops. Mr. I. J. Hayward, leader of the London County Council, recently expressed the hope that their plans for the Elephant would bring a Piccadilly Circus to its drab environs; there will be plenty of lights from a 25-storey block of flats, from shops and sky signs. A memorial to Faraday, local boy who made good, may be erected on the major island site. Appropriately it would surmount a resited London Transport substation. Like Piccadilly Circus, the Elephant has come in for its share of criticism. The chief target is the area for circulation at the main intersection; L.C.C. road engineers are confident that it will have a 50 per cent reserve capacity measured in terms of the overall peak period. In any

LEADING FEATURES IN THIS ISSUE

| Portrait | PAGE | Modern Airways Section | PAGE |
|--|------|-------------------------------|------|
| Mr. J. R. D. Tata | 9 | By Boeing 707 to New York .. | 11 |
| Special Articles | | Regular Features | |
| Value of the Railway Congress .. | 2 | Commercial Aviation | 9 |
| South Lancashire Interurban Trolley-bus System | 3 | Financial Results | 16 |
| London Midland Modernisation—3: Styal Line Electrification Work .. | 5 | Forthcoming Events | 2 |
| Components and Service Equipment at the London Motor Show .. | 7 | Important Contracts | 16 |
| Jet Aircraft and Airline Costs .. | 9 | Letters to the Editor | 12 |
| Tramcar Converted as Mobile Power Station | 10 | Lorry, Bus and Coach News .. | 4 |
| Diesel Traction in North Eastern Region. By F. L. Hick | 13 | News from All Quarters | 8 |
| Small International Van with B.M.C. Running Units | 14 | Road Vehicle Industry | 6 |
| | | Shipping and Shipbuilding .. | 16 |
| | | Social and Personal | 15 |
| | | Tenders Invited | 16 |

shire traffic area records a tendency on the part of bigger concerns to increase seating capacity of existing vehicles by fitting additional seats upstairs in double-deckers.

The Urban Motorway Arrives

ACKNOWLEDGMENT of the principle of the urban motorway is made by the Minister of Transport in respect of a new road proposal through Newport, Mon. This £5½ million scheme would provide a through route from ½ mile east of the Royal Oak on A48, over the Usk on a new bridge 1,100 yd. south of the present one, to rejoin the Cardiff road near the hospital. Although for motor traffic only, special connections would enable other traffic in the town to have the benefit of the new river crossing. With a by-pass to Caerleon-on-Usk 5½ miles of new road are involved. The Minister has also published a draft Order under the Trunk Roads Act, 1946, showing the line of a 2-mile length of limited access trunk road projecting Eastern Avenue (or A12) westwards from Wanstead across Leyton, with a new Docks Relief Road for later construction from Canning Town to the Eastern Avenue extension. Representations upon the Order and objections may be made until January 26 next. The advertised route lies alongside an existing railway, so reducing the severance effects on the community.

Piccadilly in Southwark

DECEMBER should see in traffic the smaller roundabout in the Elephant and Castle redevelopment scheme. This is the one which will feed in traffic from the south, via Newington Butts and Walworth Road. There is no sign as yet, of course, of the much larger roundabout to be located at the Elephant intersection proper, where St. George's Road, London Road, Newington Causeway and New Kent Road converge. It will be recalled that these two circulating areas are to be joined by an eight-lane spinal road—

event the alternatives of flyovers or underpasses have twice been considered and rejected because of the extraordinary complexity of the road layout. Even in its present woebegone condition the Elephant is an important bus objective and during slack hours many turn short there. Five terminal stands have hitherto been established for the purpose in surrounding streets; there is now a good case for a permanent lay-by such as is provided at Waterloo.

Encouraging the True Amateur

LITTLE more than five years after the initial steps were taken in July, 1953, to form the Westminster Bank Railway Society to associate those in that organisation interested in the study of railways and allied forms of transport, the society's new club room was opened on October 20 by Sir Reginald Wilson, member of the British Transport Commission and chairman of the Eastern Area Board. He obviously undertook the task with great pleasure and, even if much of what he said was only for "within these four walls," it is permissible to record his remark that it would be folly not to take any opportunity of encouraging those whose approach to the railways, which had done so much in the past and had so great a future before them, was that of the true amateur. Sir Reginald was not certain that the value of what the railways did was really appreciated but the existence of such bodies of friends and supporters was of inestimable value and especially when, as in this case, they looked forward as much as they looked back. His commendation of the support which the society had received from the bank management was undoubtedly merited. The new club room is above the West Hampstead branch and has even, as Sir Reginald remarked, a most luxurious carpet on the floor. We might add that it has also a most interesting collection of pictures on its walls and possession of so pleasant a meeting place should encourage still further the development of a flourishing society.

Tuition in Shunting Movements

THE need for careful tuition at places where complicated shunting movements are involved is stressed by Colonel W. P. Reed, Inspecting Officer of Railways, in his report to the Minister of Transport on a collision between a passenger train and an engine and brake van at 8.13 a.m. on May 20 last opposite Arkleston Junction signal-box, near Paisley. The driver of the engine with van, which was being shunted from one side of the four-track route to sidings on the other, "rashly set his engine in motion without having received authority to do so." He drove it over the crossover into the path of the 7.15 a.m. Gourock-Glasgow up passenger train. The combined speed at impact was stated to be about 35 m.p.h. The first two coaches of the train were telescoped and 97 persons were injured, of whom one died. Colonel Reed is satisfied that the train driver was fully alert and lost no time in applying the brake, and the signalman concerned was in no way to blame. Main responsibility for the accident is attributed to the driver of the shunting engine, a passed fireman "who accepted the word of his fireman, an inexperienced passed cleaner, that a signal to proceed had been given and failed to verify that it was the correct signal and that it applied to his engine. He also omitted to ensure that signals were exchanged with the guard, and it was clear from his evidence that such was his habit." In view of his inexperience, however, the passed cleaner is not blamed for his mistake. The guard is stated not to have been looking out for the hand signal from the box and not to have grasped his responsibilities in this respect. The shunting movement is described as more difficult than one of a passenger or freight train running in accordance with fixed signals. "Such movements," the report states, "are often carried out by junior drivers or passed firemen, assisted by very inexperienced firemen, with junior guards, as they are normally a prelude to shunting work. It is all the more necessary, therefore, that the dual responsibilities of enginemasters and guards on these occasions for observing signals should be brought home to the junior men, both during teaching and examination and during footplate supervision." Installation of a fixed signal is recommended in this case to assist shunting engine crews.

Vehicle Licensing in Tanganyika

DIFFICULTIES confronting a newly appointed Transport Licensing Authority in trust territory are exemplified in the first report of such a body appointed in Tanganyika in February, 1956. The Authority found that the number of vehicles operating on the roads was much greater than necessary and that that fact was effectively hindering the emergence and development of efficient services. It was clear, however, that the Authority could not immediately make any great reduction in the number of vehicles or embark on any serious measures of rationalisation without gaining further knowledge and experience before a fair period of warning had been issued as to clearance from the roads of surplus and substandard vehicles. Effective and salutary measures are therefore to be introduced in two years' time, when the first licences have expired. Most of the applicants for public carriers' licences are found to be far from genuine full-time carriers dependent on transport for their living. They are traders and shopkeepers who, in order to purchase a vehicle for their own requirements, must resort to the carriage of goods for hire and reward in order to pay for the vehicle and its upkeep. These people, states the report, are always able to undercut the genuine full-time transporter for any particular job in which they are interested; in extreme cases their immediate interest is merely to obtain sufficient cash to make the next payment due on the hire purchase of the vehicle or even only to pay for the cost of the petrol for the return journey. The need for a licensing system in Tanganyika has frequently been stressed in our columns.

To attain your goal GET THINGS STRAIGHT

and the straight fact is that there's a Bawn tanker tailor-made for every liquid moving job. Petrol, chemicals, oil, hot liquids, cold

liquids—our tankers cope with them all, conveying at normal or maintained temperatures as required. For years we've taken the worry out of the tricky job of moving liquids.

Why not give us a ring?



G.1



W.B. BAWN
& COMPANY LIMITED

Byron Works, Blackhorse Lane, London, E.17
Telephone: LARKWOOD 4411/4

ALSO MANUFACTURERS OF "HELMSEMAN" STEEL EQUIPMENT AND STEEL PLATE FABRICATIONS

OFFICIAL NOTICE ANNOUNCEMENTS

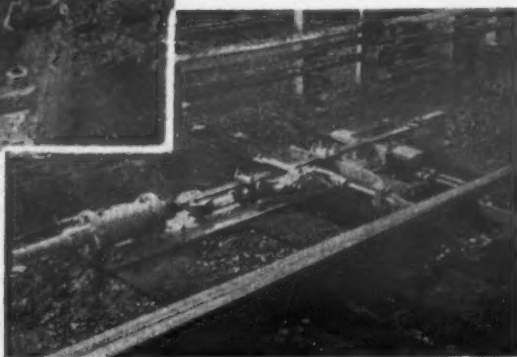
Official Notices, Tenders, and other announcements, can be accepted up to first post Tuesday morning for insertion in the current week's issue.
Rate: 45s. per single column inch.

OFFICIAL NOTICES
MODERN TRANSPORT, 3-16 WOBURN PLACE, LONDON, W.C.1

MODERN EQUIPMENT FOR MODERN CONDITIONS



Photographed at St. Pancras by courtesy of
British Railways, London Midland Region



WESTINGHOUSE

ELECTRO-PNEUMATIC POINT LAYOUT

incorporating the POINT VALVE STYLE D
using intrinsically safe circuits, and with—

- Cut off valve for air economy.
- Soft seated valves for efficiency.
- Magnets immunised against 50-cycle A.C. Traction.
- Constant detection of the energised operating magnet.
- Emergency operation by key—thus avoiding interference with operating magnets.
- Plug-coupled wiring for ease of replacement and disconnection of wiring during emergency working.

and

Latest point movements with

- Hardened steel faces and bushes to minimise wear.
- Eccentric bushes to adjust for wear.
- Straight connections.
- Even-sided operating cylinders.
- Non-interchangeable air connections.
- All-over lightweight cover.

Westinghouse Brake and Signal Co. Ltd., 82 York Way, London, N.1

Associated in India with
Saxby & Farmer (India) Private Ltd., Calcutta

Associated in Australia with
McKenzie & Holland (Australia) Pty., Ltd., Melbourne

Associated in South Africa with Westinghouse Brake & Signal Co. S.A. (Pty.) Ltd., Johannesburg

Agents: Bellamy & Lambie, Johannesburg



Published Every Friday
RUSSELL COURT, 3-16 WOBURN PLACE,
LONDON, W.C.1

Telephone Number: TERNHOLM 0308 (3 lines)
Telegraphic Address: Transpobee, Westcott, London

ANNUAL SUBSCRIPTIONS
BRITISH ISLES, 35/-; CANADA, 32/6;
ELSEWHERE ABROAD, 35/-
payable in advance and postage free

The Editor is prepared to consider contributions offered for publication in MODERN TRANSPORT, but intending contributors should first study the length and style of articles appearing in the paper and satisfy themselves that the topic with which they propose to deal is relevant to editorial requirements.

Value of the Railway Congress

HIGHLY successful as a means of inter-changing ideas between railway administration and their officers, the 17th session of the International Railway Congress Association held in Madrid had the benefit also of the extremely efficient arrangements provided by the local organising committee under the presidency of Sr. Agustin Plana, Under-Secretary of the Ministry of Public Works in Spain, and the hospitality of the Spanish National Railways. Organisation for travel, for the business sessions, for the social events and for the interesting technical visits was always of the highest order and every consideration was given to the comfort and convenience of the delegates, as well as for their information and instruction. The International Railway Congress Association took its origin at a meeting in Belgium in 1885 on the occasion of the 50th anniversary of the opening of the first public railway in that country between Brussels and Malines, through the energetic advocacy of M. Fassioux, then Secretary-General of the Belgian Ministry of Railways. Under the auspices of the Belgian Government a gathering of railway officers was attended by the delegates of 19 governments and 131 railway administrations representing 31,500 route-miles. By contrast, owing to the consolidation of railways into nationalised systems, this year's meeting was attended by the delegates of 114 railway undertakings, but covering some 375,000 miles.

Work of Association

ESTABLISHED to promote the progress and development of railways, the Association comprises representatives of railway administrations whether State or privately owned, and of the governments of the countries in which those railways run. The Association has a permanent commission which meets regularly in Brussels and there are also bi-annual meetings of an enlarged commission. Its congresses, at present held at four-yearly intervals, yield recommendations which are left for consideration by member governments and railways administrations. The permanent body, which was formed at the 1885 congress and consolidated two years later, received initially the support of the Belgian and French Governments and subsequently received world-wide recognition. The venues of the 17 congresses are not without interest. After Brussels in 1885 they were held in Milan (1887), Paris (1889), St. Petersburg (1892), London (1895), Paris (1900), Washington (1905), Berne (1910), Rome (1922), London (1925), Madrid (1930), Cairo (1933), Paris (1937), Lucerne (1947), Rome (1950) and London (1954). On several occasions railway centenaries have been marked by the presence of the congress, as in London in 1925 when the Stockton and Darlington celebrations were in hand, and at Lucerne in 1947 when the Swiss were celebrating their own railway centenary. The Madrid congress was held 110 years after the opening of the first railway in Spain.

Thoroughness of Procedure

THE thoroughness of the Association's procedure is most marked and covers every phase of railway administration, operation and engineering. In the intervals between the congresses the permanent commission selects the subjects and the authors (or reporters, as they are called). It is usual for there to be more than one reporter for each subject, each covering so many countries. They circulate questionnaires to member undertakings and summarise and report upon the information so collated. A special reporter for each subject finally summarises the reports and draws up conclusions for the congress. The reports are

MODERN TRANSPORT NOVEMBER 1, 1958

published in the *Bulletin* of the Association, which also contains a regular series of original technical reviews on topical matters; the reports are available some time before the congress, at which final recommendations are drawn up. The recent congress was divided into five sections, in each of which two questions were considered. First was Way and Structures, in which the ageing of bridges and viaducts and long welded rails were the questions; second was Motive Power and Rolling Stock (design and improvement of diesel railcars and multiple-unit trains; maintenance and repair of electric locomotives); third was Operation (goods handling and palletisation; principles for electric and diesel passenger services); fourth was General (electronic devices in mechanised administrative work; finance and capital conservation and renewal); and fifthly, Light and Colonial Railways (undulatory wear of rails, reducing working expenses). The reports prepared for congress, coupled with the *Bulletin*, comprise a veritable encyclopaedia of railway knowledge over the past three-quarters of a century.

Modification Deserves Consideration

IT is in the production of conclusions arising from the highly detailed and most valuable reports which assemble the latest information on any given subject, that the congress, as we hinted on the occasion of that held in Rome in 1950, seems to fall short of modern thought and requirements. The conditions under which railways operate in many diverse countries are such that practices which meet public requirements or cover the engineering considerations in one country are quite inadequate or unsuitable in other parts of the world. There is thus great difficulty in arriving at common conclusions, and even with much goodwill among the delegations, as was clearly to be seen in the Madrid meetings, there must appear an element of hair-splitting in trying to arrive at phraseology covering all circumstances; difficulty lies in translating fine shades of meaning into the official languages for the record. The conclusions thus arrived at with great labour, despite the occasional production of a gem of collective wisdom, often appear so completely innocuous or platitudinous as to be glimpses of the obvious that are not worth further dissemination. The congress thus masks its true and undoubted value behind an outmoded system. It would probably be worth abandoning the procedure for arriving at hard and fast conclusions. Better still would be to offer papers by experts (who could well have the benefit of the experience of all the member administrations in the same way as is done at present for the reports by questionnaire) and then to provide facilities for a straightforward discussion of the resultant paper. Some modification of the present method seems to deserve early consideration by the permanent commission.

Forthcoming Events

- November 1.—Electric Railway Society. Paper by Mr. J. H. Price, "The Moscow Metro." At College of Technology, Suffolk Street, Birmingham. 2.45 p.m.
Railway Correspondence and Travel Society (South of England). Paper by Mr. T. B. Sands, "Reminiscences of the Midland and South Western Junction Railway." At Y.M.C.A., Friar Street, Reading. 6 p.m.
November 3.—Institute of Transport (East Anglia). Paper by Mr. T. E. Scott-Chard, "Highways of the Air." At offices of the Eastern Counties Omnibus Co., Limited, Norwich. 6 p.m.
Institute of Transport (Metropolitan). Visit of president and paper by Mr. C. E. Whitworth, "Some Impacts of Air and Road Transport on Railway Economics and Practices." At 80 Portland Place, W.1. 6 p.m.
Institute of Transport (Sheffield). Paper by Mr. P. H. Smith, "Taking Stock of Maintenance." At Royal Victoria Hotel, Sheffield. 6.30 p.m.
Institute of Road Transport Engineers. Annual dinner and dance. At Piccadilly Hotel, W.1. 6.30 p.m.
Institute of Road Transport Engineers (Scottish). Paper by Mr. D. W. Bravery, "From the Laboratory to the Road." At Institution of Engineers and Shipbuilders, Elmbank Crescent, Glasgow. 7.30 p.m.
November 4.—Institute of Transport (Gloucester and Cheltenham). Paper by Mr. J. F. Cox, "Licensing of Goods Vehicles." At Midland and Royal Hotel, Gloucester. 7 p.m.
Institute of Transport (Midland). Paper by Mr. P. S. Gill, "Malaya and the Malayan Railway." At Exchange and Engineering Centre, Birmingham. 6.30 p.m.
Institute of Transport (North Western). Paper by Mr. J. Winter-Lotimer, "Cross-Channel Shipping." At Gas Service Centre, Manchester. 6.15 p.m.
Institute of Transport (Hull G. and S.). Paper by Captain N. F. Newton, "The Carriage of Goods by Sea." At Chamber of Commerce and Shipping, Samman House, Bowdley Lane, Hull. 7.30 p.m.
Institution of Civil Engineers. Presidential address by Prof. A. J. S. Pippard. At Great George Street, S.W.1. 5.30 p.m.
Permanent Way Institution (Leeds and Bradford). Paper by Mr. H. Field, "The Use of the Matisa Recording Trolley." At B.R. Social and Recreation Club, Ellis Court, off Aire Street, Leeds City Station. 7 p.m.
November 5.—Electric Railway Society. Paper by Mr. A. Gorton, "The Daily Round Underground." At 153 Drummond Street, N.W.1. 7.15 p.m.
November 6.—Institute of Transport (Merseyside). Paper by Mr. W. J. Crosland-Taylor, "Realism as Applied to Road Passenger Transport." At Chamber of Commerce, 1 Old-hall Street, Liverpool. 6.30 p.m.
Institute of Transport (South Eastern). Paper by Mr. M. A. Cameron, "Channel Tunnel." At County Hotel, Canterbury. 7.15 p.m.
Institution of Electrical Engineers. Paper by Messrs. T. S. Pick and A. Readman, "The Recognition of Moving Vehicles by Electronic Means." At Savoy Place, W.C.2. 5.30 p.m.
Institute of Traffic Administration. Paper by Mr. W. R. A. Matheson, "Development of West London Air Terminal." At Caxton Hall, Westminster, W.1. 7.15 p.m.
Light Railway Transport League. Paper by Mr. R. B. Parr, "The Tramways of Glasgow." At Exchange and Engineering Centre, Birmingham. 7.15 p.m.
November 7.—Institute of Transport (Leicester). Paper by Mr. F. Lovell, "Packages for All Transport." At City Transport Offices, Leicester. 7.30 p.m.
Institute of Transport (Midland). Annual dinner and visit of president. At Queen's Hotel, Birmingham.
Institute of Transport (Western). Paper by Mr. J. B. Burnell, "At Docks Office, Bristol." 1.15 p.m.
Institute of Road Transport Engineers (South Wales). Paper by Dr. F. Wallace, "The Free Piston Gasifier with Special Reference to Vehicle Application." At South Wales Institute of Engineers, Park Place, Cardiff. 7 p.m.
Institution of Highway Engineers (North Eastern). Paper by Mr. C. W. Hurley, "Highway Law." At Kings College, Newcastle upon Tyne. 7 p.m.

SOUTH LANCASHIRE TROLLEYBUSES

An Interurban Electric Traction Undertaking

LONG LIFE FROM ITS VEHICLES

ACTIVE development of a number of British trolleybus undertakings is still continuing, but it is nevertheless true that this year has seen the passing of two further systems, those of St. Helens Corporation and the South Lancashire Transport Company, the second-mentioned of which covered a very wide territory in the area between Liverpool and Manchester and was, until the last day of August, the best example of an interurban system in the country, as well as of the long life that can be obtained from electric traction equipment, as some of the original fleet survived for 28 years. In the past six years the Birmingham, West Hartlepool, Llanelly, Notts and Derby, Southend, Darlington, Pontypridd and St. Helens systems have been abandoned, quite apart from nine other much smaller systems that vanished many years earlier. In addition, Hastings and London have announced abandonment proposals, though this will still leave 26 surviving trolleybus undertakings.

In length of route mileage the South Lancashire system was one of the largest, being exceeded only by Newcastle, Bradford, Huddersfield, Wolverhampton and London. Its 31.51 miles of route included 26.66 miles owned, 3.11 miles leased from Bolton Corporation, and 1.74 miles leased from Farnworth U.D.C. In addition, a further 4.13 route-miles, owned by St. Helens Corporation, were worked over under running powers. The St. Helens Corporation trolleybuses also exercised running powers over 9.74 miles of S.L.T. route. Farnworth has never owned any trolleybuses, but Bolton owned four, which were operated and maintained by S.L.T. and painted in the latter's livery.

Long-Life Vehicles

With a maximum of only 71 vehicles, the S.L.T. could not claim to be one of the largest trolleybus fleets. This was because none of its routes had a very frequent service, and one section had only four buses an hour. The company linked together a series of quite small towns, and hence did not have the opportunity of working a frequent service with a large number of vehicles over a shorter total route mileage, as is the case with most municipally-owned trolleybus systems.

A striking testimonial to the thorough and efficient manner in which the S.L.T. trolleybuses have been maintained and well looked after has resulted in a unique claim to fame for what must surely be the oldest passenger-carrying vehicles in Great Britain (other than trams) to remain in continuous service under the same ownership and on the same route, without being demoted to workmen's services or any other activity less arduous than that for which they were originally constructed. Five of them thus survived for 28 years and one month, being the residue of a batch of 10 which entered service on August 1, 1930. The other five lasted for 26 years, whilst nine of a further batch of 20 trolleybuses supplied in 1931 have also

—62.65 by Act of 1900, 12.50 by Act of 1901, and 0.59 by Act of 1903. Of this, only 30.66 miles were actually built, plus an additional and isolated 3.12 miles from the Prescott municipal boundary to the then Liverpool boundary at Knotty Ash. This part was operated by a separate company, wholly under the same ownership, and entitled the Lancashire Light Railways Co., Limited, but it was later sold to Liverpool Corporation and is now covered by a limited-stop bus service from that city.

The gap between Prescott and the rest of the South Lancashire system was occupied by the much older St. Helens and District Tramways Co., Limited, which was worked by horse and steam traction. Ownership was municipalised on April 1, 1897, whilst operation was taken over by a new company, entitled the New St. Helens and District Tramways Co., Limited, which was registered on November 4, 1898, the two chief promoters being James Atherton and Jacob Atherton. Their registered offices were at first in St. Johns Lane, Liverpool, and were moved a few years later to the town of Atherton. The brothers Atherton soon set about making Atherton town the centre of their proposed vast new tramway network in as-yet

Prescot to Knotty Ash section the latter was sold to Liverpool Corporation as from the same date, whereupon the L.L.R. and N.S.H. companies were liquidated.

Opening of Trams

The first part of the South Lancashire tramway system to be opened to traffic was Lowton—Leigh—Atherton—Four Lane Ends, on October 20, 1902. This was followed by Atherton—Tyldesley five days later, Atherton—Hindley on February 7, 1903, Hindley—Haydock on April 4, 1903, Tyldesley—Boothstown on April 20, 1905, Walkden—Brookhouse on June 30, 1906, Boothstown—Worsley—Swinton—Walkden on September 27, 1906, and Walkden—Little Hulton—Buckley Lane End on August 28, 1913. The Lowton route was extended by half a mile on July 6, 1906, and a half-mile branch from Atherton to Bag Lane Station was opened on October 25, 1902, but did not see much use; it was



A Karrier four-wheeler with Weymann bodywork squeezes under the railway at Howe Bridge Station

Farnworth system joined the Bolton tramways at Moses Gate; hence a through Clifton—Kearsley—Farnworth—Bolton tramcar service was inaugurated on June 14, 1909, the same date as at Four Lane Ends, but in this case both the S.L.T. and Bolton participated.

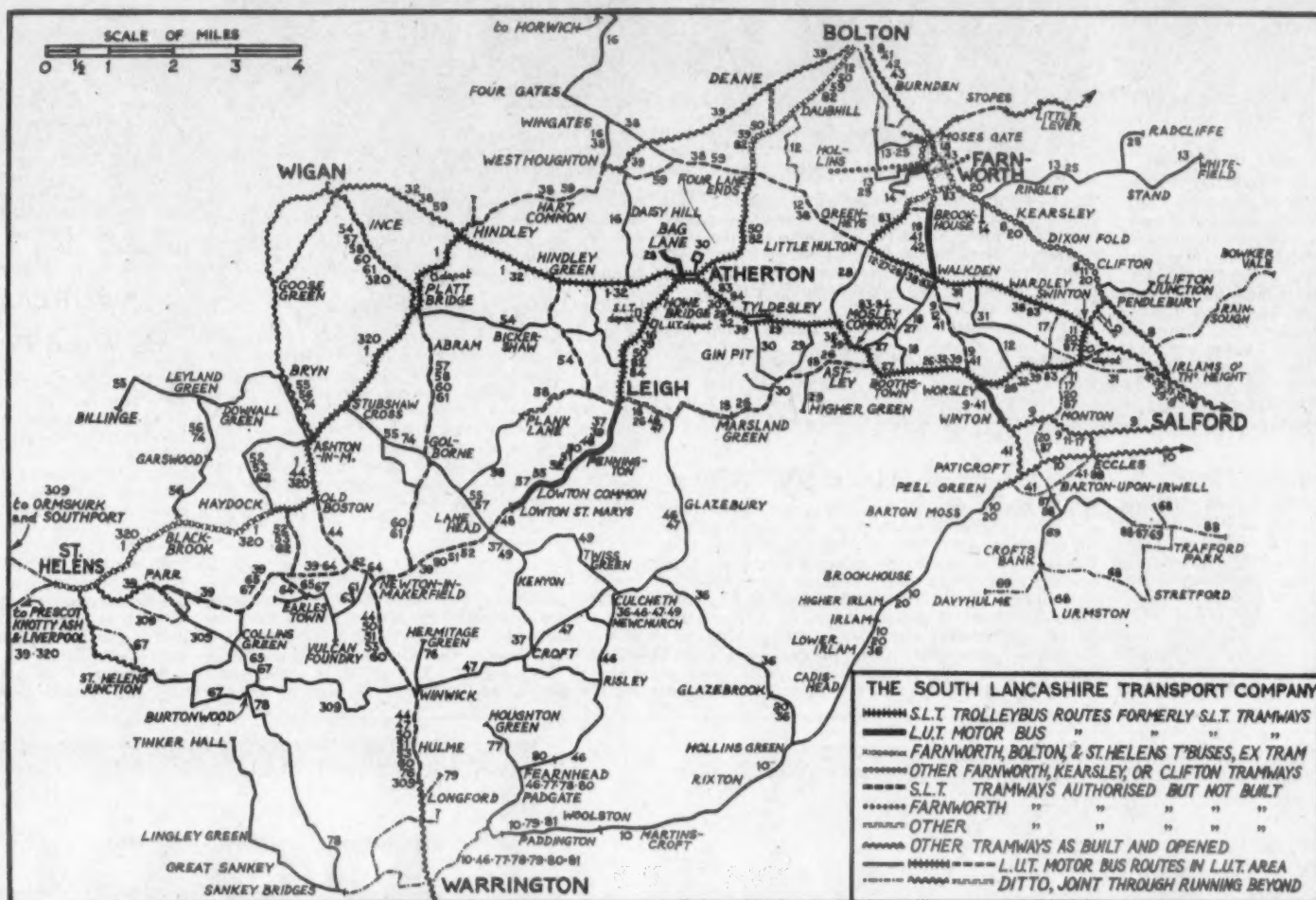
The Lowton route of the S.L.T. passed through Leigh, but Leigh Corporation neither owned nor operated any part of it, a fact which gave rise to some negotiation during the past year or two in connection with the replacement of trolleybuses by motor buses. Leigh did promote a Bill in 1903 asking for 4.47 route-miles on local routes connecting with this main road, and 3.63 miles of this was granted in the Act, though none was ever constructed. There was a short branch of 0.32 miles in Hindley which was owned by Hindley U.D.C., leased by them to South Lancashire, and re-leased by S.L.T. to Wigan Corporation.

Gauge Problems

The whole of the S.L.T. system and all those with which it connected were of 4 ft. 8½ in. gauge. Some of the Wigan routes, however, were of 3 ft. 6 in. gauge, and this was the gauge specified in a Light Railway Order for which Wigan applied in November, 1899, asking for three routes. The Order was granted on January 30, 1902, one of the three routes being the 2.67 miles from Platt Bridge to Ashton-in-Makerfield. This was, however, an essential part of the S.L.T. route from Atherton to Haydock, and hence the powers were transferred, the gauge altered, and the line built and opened by the S.L.T.

The numerous other tramway routes authorised in the S.L.T. Acts of 1900 and 1901 but not built are shown on the accompanying map. There would have been five routes radiating from Newton-in-Makerfield, which in fact never had any trams at all, and the isolated Warrington tramways would have been joined up to the vast network in South Lancashire which, under various ownerships, stretched in an unbroken chain from Bootle on the Mersey to Littleborough and Mossley in the Pennines. The S.L.T. obtained further Acts in 1905 and 1906 to keep alive the powers for some of the unbuilt routes authorised in 1900, all the remainder being abandoned, but in another Act of 1911 some 3.24 miles of abandoned routes were re-authorised.

The S.L.T. fleet comprised a maximum of 82



Layout of the South Lancashire Transport trolleybus system and associated services

virgin territory, the result being the 1900 and 1901 Acts already mentioned.

They formed the L.L.R. on April 21, 1898, and obtained on March 10, 1899, a Light Railway Order for the 3.12 miles of route; these were opened in June, 1902. The South Lancashire Transport Company was incorporated on August 6, 1900. A St. Helens, Leigh and Bolton Light Railways Syndicate had been formed in 1896, to build 3 ft. 6 in. gauge tramways based upon Leigh, although Parliamentary powers were not applied for. This was reconstructed on November 29, 1900, as the South Lancashire Electric Traction and Power Co., Limited, and became the parent com-

abandoned in 1915. Another short S.L.T. branch opened on March 29, 1907, ran from Worsley to Winton, connecting there with a Salford Corporation tramway; consequently it was always operated by Salford.

At Four Lane Ends connection was made with a Bolton Corporation route which had been opened on July 19, 1902, whilst at Haydock connection was made with a St. Helens route opened on May 2, 1900. The through service via Four Lane Ends did not start until June 14, 1909, when the company cars from Lowton were extended into Bolton, but Bolton cars never ran through on to the S.L.T. by this route. At Haydock, however,

There would have been five routes radiating from Newton-in-Makerfield, which in fact never had any trams at all, and the isolated Warrington tramways would have been joined up to the vast network in South Lancashire which, under various ownerships, stretched in an unbroken chain from Bootle on the Mersey to Littleborough and Mossley in the Pennines. The S.L.T. obtained further Acts in 1905 and 1906 to keep alive the powers for some of the unbuilt routes authorised in 1900, all the remainder being abandoned, but in another Act of 1911 some 3.24 miles of abandoned routes were re-authorised.

The S.L.T. fleet comprised a maximum of 82



One of the original 10 South Lancashire trolleybuses with Guy chassis and Roe 56-seat lowbridge body, built in 1930 and operating until the end; Roe 64-seat highbridge body of 1938 on a Leyland chassis; Weymann 56-seat of 1943 on Karrier chassis; and Sunbeam trolleybus of 1948 with M.C.W. (Weymann) 64-seat highbridge body

lasted right to the end. By contrast, the six newest vehicles in the fleet were only 10 years old. The 1930-31 vehicles all retained their original bodywork, unaltered except at the front end, which speaks very well for the craftsmanship of a Roe body on a Guy chassis.

The routes abandoned on August 31 comprised the entire system save only for the 9½-mile Atherton to Haydock section, which had closed down on November 11, 1956. Like all British trolleybus systems other than Tees-side and Brighton Hove and District, the South Lancashire was the successor to a tramway undertaking. The company, which is 58 years old, has always remained outside all the large groups of tram and bus companies but there have been several associated companies functioning in the same area.

Network History

In its early days the company had great ambitions for a vast network of electric tramways throughout South Lancashire, but in the event much of this was not built, whilst other parts were built by municipalities instead. The company was authorised to build 75.74 miles of electric tramway

pany of the group, wholly owning the S.L.T., L.L.R. and New St. Helens companies as well as a fourth subsidiary, the South Lancashire Electric Supply Co., Limited, which was registered on June 29, 1900, for supplying electricity rather than operating tramways. All five companies had their registered offices at Atherton, and H. P. Conibear as secretary.

Story of the Group

The parent company went into receivership in July, 1904, and its assets were later taken over by a new Lancashire United Tramways, Limited, registered on December 29, 1905, with the same (and other) directors. After minor changes in its title in 1926 and 1956 this company still survives today as the direct owner of a large fleet of motor buses, also the owner of the statutory South Lancashire Transport Company, procedure for the absorption of which was set out under the Act of July 23, 1958, that authorised abandonment of the trolleybuses. Operation of the St. Helens tramway system was taken over by St. Helens Corporation on October 1, 1919, when the lease of the New St. Helens Company expired. As this isolated the

where both companies were under the same ownership, a through service was started at an early date and both operators participated.

Non-Operating Owners

Farnworth Urban District Council owned its own tramway system, which eventually amounted to 3.23 route-miles. A part of this was originally leased to a company, and then leased to Bolton Corporation as from April 13, 1900. When the lease expired, Farnworth Corporation took over operation on June 2, 1902, purchasing eight large bogie tramcars with which to do so. The adjacent Kearsley U.D.C. also owned 1.82 route-miles of tramway, and these were leased by Farnworth. Farnworth, however, did not operate tramways for very long, and on April 1, 1906, both the Farnworth and the Kearsley systems were leased to the S.L.T. for 21 years. Beyond Kearsley a further 1.4 miles of tramway in the Clifton area was constructed by Barton-upon-Irwell Rural District Council and leased to the S.L.T. Salford Corporation had a tramway route to Pendlebury, and in 1928 this was linked to the Barton line at Clifton, thus permitting through running. The

tramcars, which includes the eight Milnes double-deck eight-wheelers taken over from Farnworth, most of the remainder being double-deck four-wheelers by Milnes. All the eight, also most of the rest, were eventually fitted with top covers. The Prescott line of the L.L.R. had a further seven Milnes four-wheelers, numbered 83-89. The administrative offices, power station, main car depot, and overhaul works were always at Howe Bridge, a little to the south of Atherton on the Leigh route, but there were subsidiary depots a short way north of Platt Bridge and south of Swinton. The services as operated comprised Lowton—Atherton—Bolton, Atherton—St. Helens, Atherton—Swinton, Swinton—Walkden—Moses Gate, Walkden—Little Hulton—Farnworth, and Clifton—Farnworth—Bolton.

The S.L.T. lease of the Farnworth routes, having expired, was renewed for a further 21 years as from April 1, 1927, but the company then subcontracted its responsibilities in this matter to Bolton Corporation, which henceforth supplied all, instead of only some, of the trams on the Bolton to Farnworth service, and also inaugurated a new

(Continued on page 14)

LORRY—BUS—COACH

Special-A Renewals Published

FIRST renewal applications for special A-licences were published last week in the Metropolitan area. Four applications are listed in A and D. 864; it is understood that the first special A-licences expire on December 31, 1958. In three cases, the normal user sought is "general goods, Great Britain"; in the fourth it is closely drawn. The licensing authority is to send out notices of renewal as the expiry of each special A-licence draws near and does not propose to consolidate such licences, at least for the present, where an applicant holds more than one. It is pointed out that the applicant may wish to specify a different normal user for certain of his vehicles. Other licensing authorities are adopting a cautious approach to these problems.

Birmingham Will Keep a Step Ahead

IT is thought unlikely that Birmingham will alter its practice of paying its bus crews 10s. above the national standard. The Transport Committee has already recommended payment of any wage award granted to provincial municipal busmen.

Half Fare Age Limits in Eire

SCHOOL children up to the age of 16 will be allowed from today to travel at half fare to and from school on buses of Coras Iompair Eireann working on Dublin, Cork, Waterford, Limerick and Galway routes. The present age limit is 15. Lunch-time fares of 1d., for adult fares of up to 6d., are already available up to age 16. On the C.I.E. railways the age limit will be raised from 14 to 15 for all journeys from today (November 1).

Illegal Passenger Vehicles in Ceylon

CEYLON police have been instructed not to prosecute private vehicles of any type which carry passengers in excess of the specified seating capacity. Cases pending may be withdrawn with the permission of the court. The Ceylon Transport Board had drawn the attention of the Government recently to the competition it was facing from private vans and small utilities, which now number about 2,900. This figure exceeds the Transport Board's own fleet strength. "Unless stringent action is taken to combat this menace of illegal operations, it will assume such proportions in the near future as to jeopardise seriously the financial position of the nationalised road and rail services," says the Board.

M. & G.N. Substitution Plans

REPLACEMENT bus services for the Midland and Great Northern Line of the Eastern Region are, as already recorded in MODERN TRANSPORT, to be provided by the Eastern Counties Omnibus Co., Limited, and the Lincolnshire Road Car Co., Limited, both members of the B.T.C.-owned Tilling group. The former would work Norwich—Lenwade—Hindolveston—Melton Constable (Service 402), Kings Lynn—Fakenham—Melton Constable—Aylsham—North Walsham—Great Yarmouth (Service 401), and Peterborough

—Thorney—Wisbech—Kings Lynn (Service 336). The last would involve surrender of two existing licences. The Lincolnshire company would work between Spalding and Melton Mowbray via Bourne, Wytham-on-the-Hill and Saxby.

London Busmen and New Award

AT a meeting of the London Transport busmen's negotiating committee on Monday it was proposed to pursue a new wage claim of 2s. per week for Country area bus crews following the provincial award of 7s. last week. This sum has since been offered to municipal busmen. The five-point settlement reached at the time of the London bus strike last summer between the union and



Plymouth (Breton Side) bus station, opened earlier this year (see May 24), adjoins a road viaduct which provides covered waiting accommodation and (left) a restaurant. The Plymouth City Transport Leyland Titan on the right is at a terminus on Royal Parade

the London Transport Executive provided for a review of the pay of Country busmen, and that its result should not leave the wages of the staff concerned "in an unfavourable position" compared with other L.T.E. bus workers "or comparable grades" elsewhere. One difficulty in the way of the London Country area men is the interpretation of the expression "comparable grades," and Mr. Frank Cousins, the T. and G.W.U. general secretary, may be asked to decide if this refers specifically to the Provincial busmen. Mr. Cousins has called a conference on November 18 at which it is possible that attempts will be made to settle a national policy for bus wages.

Long-Distance Coach to S.W. Africa

THE coach service between Cape Town and Karasburg in South-West Africa, introduced by South African Railways on October 24, does the journey in 14 hours compared with the 48 hr. by train. Passengers for Windhoek are transferred to trains at Karasburg and the complete trip from Cape Town to Windhoek takes 41 hr., cutting 22 hr. off the rail trip. The coaches carry only European passengers, their luggage and urgent light parcels. The service leaves Cape Town at 5.15 p.m. on Fridays and arrives at Karasburg at

7.35 a.m. on Saturdays, returning from Karasburg at 3.30 p.m. on Sundays and arriving in Cape Town at 5.40 a.m. on Mondays.

Crow Staff Dinner

THE annual staff dinner of Crow Carrying Co., Limited, held at the Criterion, London, on October 25, was as always a most successful affair and on this occasion it marked the 38th anniversary of the founding of the haulage business, now based on Barking and Manchester. Mr. Herbert H. Crow, M.Inst.T., chairman and managing director, presided and responded to the toast of the company proposed by Mr. D. H. Joyce, M.Inst.T. Mrs. Herbert Crow made presentations in recognition of long service to Messrs. E. H. Sams and A. J. Tucker. Mr. H. Mills then presented diplomas and medals to drivers who had qualified in the safe driving competition of the Royal Society for the Prevention of Accidents. There were 79 diplomas, four five-year medals, 21 bars to five-year medals, two 10-year medals, six oakleaf bars (to 10-year medals), four bars to the 15-year brooch and five

coupled with selective fare increases, including sub-standard fares. Some, like Lincolnshire Road Car, will seek close co-operation from their employees in the extension of one-man operations. Some municipal authorities will be beginning to feel the benefit of larger double-deckers on suitable routes, with higher receipts per mile; Leicester City Transport reports that its latest vehicles save £7,000 a year in running costs on one route.

Bus and Coach Developments

Crosville Motor Services, Limited, applies for new weekday services from Shotton Station to Wefre Hall Crescent and to Plough Lane.

Swindon Corporation applies for a new service between Town Hall and Park North Estate (Welcombe Avenue).

Odiham Motor Services, Limited, proposes a Tuesday and Thursday service between Odiham and Alton via South Warnborough and Golden Pot. The Aldershot and District Traction Co., Limited, was recently authorised to withdraw its Alton—Odiham service.

Silver Queen Luxury Coaches, Limited, applies for the licences of C. F. and R. C. Gates (Silver Queen Coaches), Worthing.

B.I.C.C. SALES TOUR

Mobile Display Unit

IN an endeavour to extend the use of B.I.C.C. mineral-insulated cables by electrical engineers in Europe, British Insulated Callender's Cables, Limited, has prepared a mobile display unit which is being taken on a tour of various Continental countries. The unit, which is contained in a Humber Hawk estate car, comprises a number of panels showing a comprehensive range of mineral-insulated cables, accessories and tools. It will be displayed at suitable sites—contractors' showrooms, hotels and so on—where in collaboration with local contractors and engineers, demonstrations of the cable and accessories and talks illustrated by lantern slides will be given to invited audiences. Technical staff will be in attendance to advise on any type of installation.

British Consuls in each of the major towns to be visited are co-operating in this effort to further Great Britain's exports. During the present tour, extending over October and November, special attention is being paid to shipbuilding yards in Belgium and Holland and to industrial concerns in Germany.

SURFACE SEALING

Of Wood Patterns and Moulds

JUST published by Bakelite, Limited, is *Advance Information Sheet B.31* giving details of Bakelite phenolic resin for the surface sealing of wooden patterns and moulds. The leaflet describes how, due to the porous nature of wood, it is always necessary to seal the surface of wooden patterns and moulds before they are used in the making of castings or laminates from epoxide or polyester resins. This imparts a smooth finish to the moulding surface and facilitates release.

Experience has shown, the leaflet says, that a Bakelite cold-setting phenolic varnish provides a satisfactory sealing medium for this purpose. The varnish is based on Bakelite liquid resin R.11168 and industrial alcohol, to which has been added a small proportion of wetting agent and liquid accelerator. Full details of the sealing procedure and two varnish formulations are given.



Matching up to the toughest tasks

DODGE
.... the truck
with built-in brawn!



3, 5, 6 and 7 ton long wheelbase forward control models.



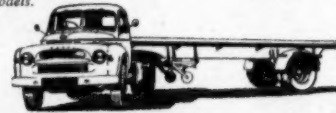
3, 5, 6 and 7 ton long wheelbase normal control models.



3, 5, 6 and 7 ton short wheelbase forward control models.



5, 6 and 7 ton short wheelbase normal control models.



10 and 12 ton normal control tractor models.

The Dodge Normal and Forward Control Series give you the choice of 42 different chassis types. Each is a payload leader with power and stamina to match. Each is a natural for hard, fast trucking work. The reason is simple! The Dodge is built up to a specification, not down to a price. And this gives it a decided edge when it comes to the bonus dividends which stem from maximum tonnage loads and added years of profit earning service.

What's more, the quality-built Dodge is tailored to your requirements. There are varying wheelbase lengths, choice of power units and rear axle options. To these can be added a long list of additional fitments and alternative tyre equipment on a generous scale.

In the long run a Dodge gives you a much greater return for money invested. Why not investigate and see for yourself before making your next truck buy? Literature on request.



NORMAL AND FORWARD CONTROL MODELS

Dodge Brothers (Britain) Ltd., Ken, Surrey

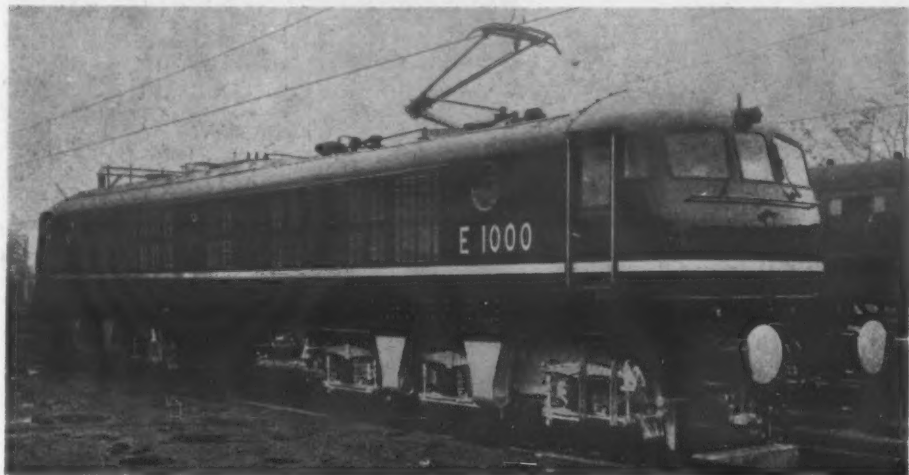
THE STYAL LINE

Preparatory Ground for Electrification

USE of the Styal line of the London Midland Region (between Longsight and Wilmslow, avoiding Stockport) as a preliminary ground for work connected with the Manchester-Crewe electrification has already been the subject of reference in MODERN TRANSPORT when the road-bed was remodelled for electric traction and bridge clearances were enlarged. During the summer re-signalling was carried out on this section—some of it on a temporary basis—and the first a.c. high-tension 50-cycle locomotive is now available for

rectified at each location. To maintain the signal aspect in the event of a complete power failure or cable fault a Nife standby battery is provided at each signal.

With the exception of the signals covering the junctions at each end, all signals will normally work automatically, but an overriding control is provided to enable the signalman to replace them to danger in an emergency. The control of signals protecting ground frame connections will be taken over by the signalman as and when these connec-



The former Metropolitan-Vickers gas-turbine locomotive, converted to electric traction for training of staff on Manchester-Crewe electrification

the commencement of training of the 294 instructors, motormen and guards required for the scheme. The first main-line electric train will run from Manchester London Road in 1960 and work has now begun there on remodelling the track layout, lengthening platforms (main-line electric trains will be of 16 coaches), and providing three new platforms to cope with the increased service. Eventually 1-4 will deal with trains to and from the former Great Central route; 5-9 (in the centre) with main-line trains on the London and North Western route; and 10-14 (west side) with local trains on the L.N.W. route. There will be a wider concourse, a remodelled footbridge and Mayfield will no longer be used for passengers, so that the footbridge thereto will be taken down.

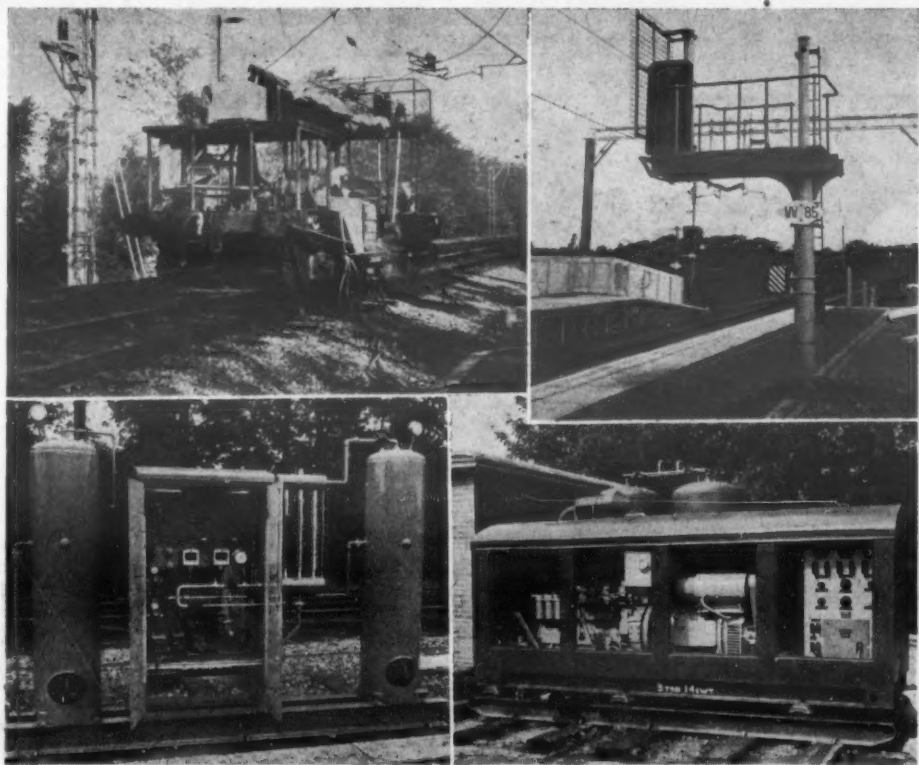
Fewer Signalboxes

A new signalbox, to replace 13 existing manual signalboxes, will be built at London Road to con-

tions are required to be used. To safeguard the signal aspects against false illumination by direct or induced effects of the a.c. traction system, the d.c. signal control relays, which are themselves immune to operation by a.c., are located in the immediate vicinity of each signal.

Immunity of Circuits

All signal circuits are 24-volt d.c. and are carried in unscreened multi-core cables. In order to limit the maximum voltage which can be induced in the signalling cable conductors from the parallel traction system to 430 under the worst fault conditions, the signalling circuits are sectionalised, the length of individual sections varying according to the distance from the substation. At each dividing point independent 24-volt transformer-rectifier sets are provided to feed in each direction. The 24-volt relays used in these line circuits are immunised against operation by a.c. of a value well



Artificial load vehicle to give steady current in the overhead line for test purposes; four-aspect colour-light bracket post with weld mesh guard to protect signal maintenance staff on high tension side at Wilmslow; below, self-contained compressor set for temporary working of a crossover electro-pneumatically; and, right, standby diesel-alternator set used for signalling power supplies pending availability of traction supply

trol the L.N.W. route as far as Heaton Chapel and East Didsbury on the Styal line. In the meantime, as remarked, the Styal line re-signalling came into commission on July 13 over the 9½ miles of double track between Wilmslow and Slade Lane Junction. The four intermediate signalboxes at Styal, Heald Green, East Didsbury and Mauldeth Road have been dispensed with and the siding connections worked therefrom are now operated by electrically controlled ground frames. These connections are normally used only for short periods each day. For control purposes this section of line is, under the new conditions, to be divided into two parts; the southern half, from Wilmslow to Gatley, comes under the control of the present Wilmslow signalbox and the other is linked with Slade Lane Junction. At a later stage the control of these two sections will be taken over by the new power signalboxes at Wilmslow and Manchester London Road respectively.

Signals

The Styal line will be equipped with 23 three- and four-aspect colour-light signals, of the multi-unit type mounted on steel bracket structures, placed in relation to the overhead traction structures to maintain a clear sight for drivers. Power for the 12-volt 24-watt tripole signal lamps is taken from the lineside signalling distributor, transformed and

in excess of the maximum induced voltage which could appear across their terminals.

Track Circuits

The Styal line is divided into 83 track-circuited sections. Two new types of track circuit equipment specially designed to work under high-voltage 50-cycle a.c. traction conditions are employed. The shorter track circuits, up to 500 yards in length, of which there are 59, are of the d.c. rectifier-fed single rail type. The rectifier feed unit incorporates a special protective arrangement to prevent a.c. traction return current being rectified and fed back to the rails as d.c. The special d.c. track relay used is immune to operation by a.c. current and is capable of withstanding considerable a.c. voltage without impairment of its d.c. characteristics.

The longer track circuits of over 500 yards are of the 75 cycle a.c. double rail type with specially designed impedance bonds. The 75-cycle current is derived from a static 50 to 75 cycle frequency converter for each track circuit. This frequency has been chosen as it is the one which can be generated most conveniently from the 50-cycle signalling supply by static means and it is not a harmonic of the traction frequency. At the relay end the 75-cycle current from the rails is fed through a frequency discriminator and rectifier to a standard d.c. track relay. The design of the frequency discriminator is such that no internal

(Continued on page 14)

IN TRACTION SERVICE IN

18 COUNTRIES...

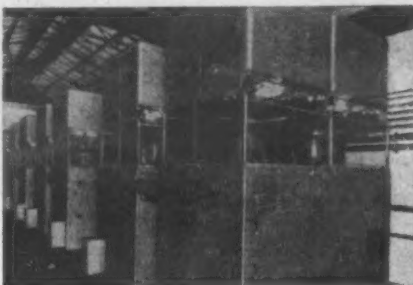
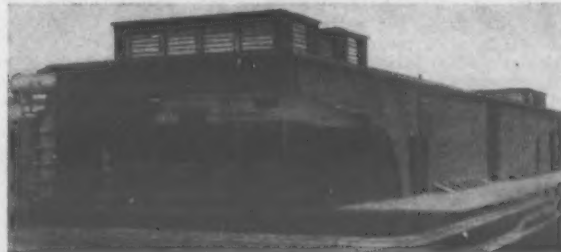
Hewittic
RECTIFIERS



the converting plant used by the World's principal railways

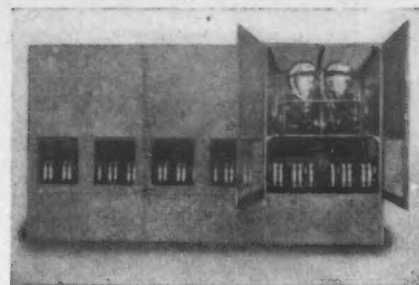
BRITISH RAILWAYS SOUTHERN REGION

One of 28 substations being equipped with Hewittic Rectifiers by the British Transport Commission for the Southern Region of British Railways. The photograph shows Wimbledon substation with one wall cut away to show the two 2,500 kW rectifiers in this half of the building.



LONDON TRANSPORT RAILWAYS

The 4,000 kW Bond Street substation, equipped exclusively with Hewittic Rectifiers. The plant comprises four 1,000 kW combined rectifier and enclosed air-cooled transformer units. This company is also responsible for the supply and installation of all A.C. and D.C. control gear. Some 90,000 kW Hewittic Rectifiers have been supplied to the London Transport Executive.



CANADIAN NATIONAL RAILWAYS

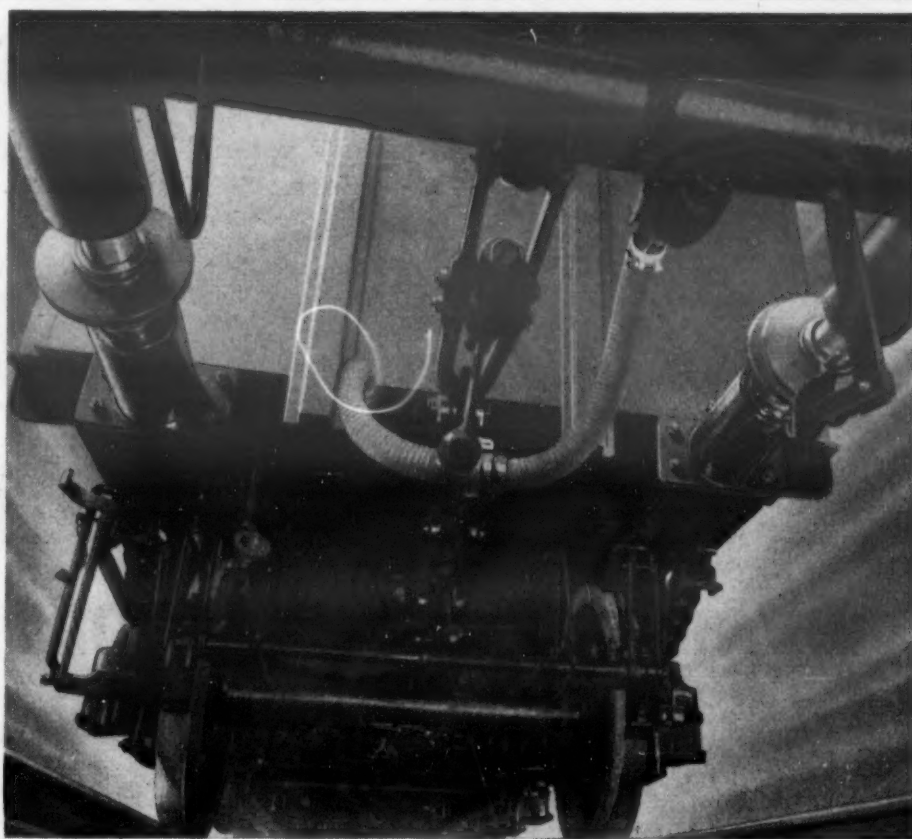
The electrified section of the Canadian National Railways, comprising some 70 track miles in the vicinity of Montreal Terminal is supplied with D.C. by Hewittic Rectifiers in two 3,000 kW substations at Central Station and Saragway. The photograph shows one of the four 1,500 kW equipments in service. These are designed for operation at 3,000 volts, D.C.

HACKBRIDGE AND HEWITTIC ELECTRIC CO., LIMITED
WALTON-ON-THAMES - SURREY - ENGLAND

Telephone: Walton-on-Thames 760 (8 lines)

Telegrams: "Electric, Walton-on-Thames"

Overseas Representatives: ARGENTINA: H. A. Roberts & Co., S.R.L., Buenos Aires. AUSTRALIA: Hackbridge and Hewittic Electric Co., Ltd., 171 Fitzroy Street, St. Kilda, Victoria; N.S.W.: Queensland, W. Australia: Elder, Smith & Co., Ltd.; South Australia: Parsons & Robertson, Ltd.; Tasmania: H. M. Bamford & Sons (Pty.), Ltd., Hobart. BRAZIL: Oscar G. Mora, São Paulo. BURMA: Neolite Manufacturing & Trading Co., Ltd., Rangoon. CANADA: Hackbridge and Hewittic Electric Co. of Canada, Ltd., Montreal; The Northern Electric Co., Ltd., Montreal, etc. CEYLON: Enves Eas, Ltd., Colombo. CHILE: Sociedad Importadora del Pacífico, Ltda., Santiago. EAST AFRICA: Gerald Hoe & Co., Nairobi. EGYPT: Giacomo Cohenca Fils, S.A.E., Cairo. FINLAND: Sähkö-Ja Koskikie O.Y. Hermes, Helsinki. GHANA, NIGERIA AND SIERRA LEONE: Glyndove, Ltd. NETHERLANDS: J. Kater E.I., Ouderkerk a.d. Amstel, Amsteldijk Noord 103. INDIA: Steam & Mining Equipment (India) Private, Ltd., Calcutta; Easun Engineering Co., Ltd., Madras, 1. IRAQ: J. P. Bahoshy Bros., Baghdad. MALAYA, SINGAPORE AND BORNEO: Harper Gillfillan & Co., Ltd., Kuala Lumpur. NEW ZEALAND: Richardson, McCabe & Co., Ltd., Wellington, etc. SOUTH AFRICA: Arthur Trevor Williams (Pty.), Ltd., Johannesburg, etc. CENTRAL AFRICAN FEDERATION: Arthur Trevor Williams (Pty.), Ltd., Salisbury. THAILAND: Wichien Phansit Co., Ltd., Bangkok. TRINIDAD & TOBAGO: Thomas Peake & Co., Port of Spain. TURKEY: Dr. H. Salim Öker, Ankara. U.S.A.: Hackbridge and Hewittic Electric Co., Ltd., P.O. Box 234, Pittsburgh 30, Pennsylvania. VENEZUELA: Oficina de Ingeniería Sociedad Anonima, Caracas.



DOWTY
Hydraulic **BUFFERS**

bring new economies to
British Railways through
greater protection to
wagons and freight

DOWTY HYDRAULIC UNITS LIMITED ASHCURCH GLOS

ROAD VEHICLE INDUSTRY

Crane Trailers at Kariba

TRAILERS of various types produced by Cranes (Dereham), Limited, Dereham, Norfolk, are playing an important part in the transport organisation serving the Kariba Dam Project on the Zambesi River in Southern Rhodesia, which, due to its location relies almost entirely on road transport. Cement, construction plant and materials are hauled 110 miles from Kafue in the north or 150 miles from Lions Den, the nearest railhead to the south bank. From both north and south, a descent of nearly 3,000 ft. has to be negotiated from railhead to dam site. Included in the many Crane trailers in use are 40 of various types

and Manchester and at scores of special events such as air displays, motor races and agricultural shows. Morris J2 vans will be used to operate the service in Glasgow and Land-Rovers in the Leeds area. Other cities and towns are likely to be brought into the scheme later.

Rust-Inhibitive Primer Available

NOW available in this country from the sole U.K. distributor, Stedall and Co., Limited, Broad Street House, 164 High Holborn, London, W.C.1, is a new time-saving rust-



Cementation Company (Rhodesia) operates 35 of these Crane-TMC 12-ton bulk-cement trailers, here seen en route to the Kariba Dam site; right, five of the 40 Crane trailers operated by Kariba Transport, Limited



operated by Kariba Transport, Limited (a subsidiary of Rhodesia United Transport); 35 Crane-TMC 12-ton bulk-cement carriers owned by the Cementation Company (Rhodesia), Limited; 12 low-loaders for loads up to 60 tons operated by Thorntons' Transportation Rhodesia (Pty.), Limited; a special 100-ton hydraulically suspended unit for carrying transformers for the hydro-electric station; a 25-ton low-bed trailer used on general site work by the overall contractor, Impresit Kariba (Pty.); and numerous other units used by minor contractors.

Castrol Antifreeze

UNIQUE anti-corrosion properties, which are the subject of a patent application, are claimed by C. C. Wakefield and Co., Limited, for its new product Castrol antifreeze compound. The result of extensive research, the Castrol product is recommended for both petrol and diesel engines and is available from normal suppliers in bulk or in sealed gallon, quart and pint tins.

R.A.C. Radio Rescue Service Extended

THE radio rescue service of the Royal Automobile Club, which has dealt with nearly 4,000 breakdowns during the past 12 weeks, is to be extended to Glasgow, Leeds and Brighton. It is already operating in London, Birmingham

and Manchester and at scores of special events such as air displays, motor races and agricultural shows. Morris J2 vans will be used to operate the service in Glasgow and Land-Rovers in the Leeds area. Other cities and towns are likely to be brought into the scheme later.

Trader Passenger Chassis

SCHEDULED to go into production in December is Ford Motor Company's Thames Trader passenger chassis. The vehicle will employ units already well proved in Trader goods chassis and will offer the option of the 100-b.h.p. diesel or 110-b.h.p. petrol six-cylinder engines of the Thames range. Briefly, the specification includes a 212-in. wheelbase, hydraulically operated clutch, four-speed synchromesh (except first) gearbox, fully floating hypoid rear axle (optional two-speed unit), vacuum-assisted hydraulic brakes providing 480 sq. in. lining area, 8.25-20 12-ply tyres and semi-elliptic leaf springs with lever-type dampers all round. It is intended for a maximum gross weight of 8 tons 10 cwt. and, with Duple 41-seat

body, has a kerb weight of about 5 tons 5½ cwt. (petrol) or 5 tons 7½ cwt. (diesel).

Renault-Alfa-Romeo Agreement

COMMERCIAL and industrial co-operation in preparation for the Common Market provisions due to come into force next year are terms of an agreement recently concluded between Regie Nationale des Usines Renault, of France, and the Italian Alfa-Romeo concern. The agreement authorises the manufacture and sale in Italy of the Renault Dauphine and other unspecified vehicles and the manufacture and sale in France of Alfa-Romeo vehicles.

Foden Helps Railway Modernisation

NEW usefulness has been given to a 1947 Foden OG4/9 chassis, which has already covered half a million miles on haulage work, by converting it to a mobile compressor plant. The vehicle



Compressor plant mounted on Foden OG4/9 chassis (see accompanying paragraph) and, right, Butterfield 1,750-gal. two-compartment stainless-steel milk tank on Albion Chieftain as seen at the recent Commercial Vehicle Show



has been fitted with a Consolidated Pneumatic 360 cu. ft. per min. compressor powered by a Rolls-Royce diesel engine by Leonard Fairclough, Limited, Adlington, which company is now using it in connection with its bridge-rebuilding contracts for the British Railways Manchester-Crewe electrification. It will also be used to aid construction of the new motorways.

Notek Foglite

RECENTLY added to its Blue Spot range by Notek Electric Co., Limited, is a new fog lamp named Foglite. The new lamp, which has a low flat beam with 23-deg. spread, has been designed to give maximum illumination in fog or mist rather than as a combined fog and driving lamp and incorporates an external adjusting screw by which the vertical aim of the lamp can be instantly varied to suit the density of the fog.

Veteran Gardner Engine

GREAT value is attached to serial numbers by Norris, Henty and Gardners, Limited, because they enable the company to check quickly the history of any Gardner engine. The earliest recorded serial number is of an engine tested 64 years ago, with the test report and history still available. Recently a Scammell vehicle with a 6LW engine was sent to the works for a minor repair—some slight trouble with the fuel pump. From the serial number and records it was found to be over 25 years old, having been

tested on May 31, 1933, and still in excellent condition; just one example, the company says, of the many vintage Gardner diesels still doing good work on the roads today.

Hymatic Valves for Hydraulic Suspension

HHEIGHT-CONTROL valves employed in the air-suspension systems fitted to the Carri-more and Crane semi-trailers and the Guy passenger chassis at the recent Commercial Motor Show were produced by the Hymatic Engineering Co., Ltd., Redditch. The Hymatic valves are of the delay type, with a delay generally approaching 10 sec. so that in transient bump and rebound air flow does not take place. Single valves are for either right- or left-hand fitting and dual valves are available which will serve both pneumatic units fitted to one axle while at the same time preventing cross flow that might give rise to instability. Valves at present being supplied have provision for delay

adjustment so that optimum settings can be selected and provision is made for replacement of wearing parts at normal servicing periods.

Tudor and D.P. Batteries Merge

FOLLOWING the announcement last October that the factory of the Tudor Accumulator Co., Limited, would gradually be closed down and its production transferred to other factories in the group controlled by the Chloride Electrical Storage Co., Limited, it is now announced that the activities of the Tudor company are to be completely merged with those of the D.P. Battery Co., Limited, Bakewell, which will in future produce and market the Kathode and Tudor ranges of lead-acid batteries.

Simms Overseas Representation

NEW arrangements have been made by Simms Motor Units, Limited, in its representation in Belgium, Luxembourg and Africa. In Belgium, De Witteleir, S.P.R.L., 641-645 Chaussee de Waterloo, Brussels, 6, which has five branches and a train of service stations throughout Belgium, has been appointed central distributor for that country. Ateliers Nic. Georges, 194 Route de Thionville, Luxembourg, has been appointed central distributor in Luxembourg, and Compagnie Generale, 13 Rue Brederode, Brussels, is made central distributor for the Belgian Congo and Ruanda-Urundi, in which territories the company has excellent servicing facilities in all the main centres.

Firestone

All-Traction

is saving **TRUCK OPERATORS** money

Here's why—

- 1 DUAL PURPOSE ON-AND-OFF-THE-ROAD**
Combines long, smooth wear on metallised surfaces with extra traction and pulling power on unmade roads.
- 2 INCREASED DEPTH OF TREAD**
New, long-wearing, cut-resisting tread rubber gives longer non-skid mileage.

- 3 TOUGH RUGGED TRACTION BARS**
Give added stability on the road, dig in and take hold for extra traction off the road.
- 4 CONTINUOUS CENTRE RIBS**
Assure safe, positive stopping power and longer even wear. New tapered grooves in tread reduce stone trapping.
- 5 TENSION-DRIED GUM-DIPPED CORD**
Prevents tyre growth, tread cracking, separation and provides a stronger bonding between cords.

Experience Counts—

44 Factories throughout the world. Firestone total sales exceed £1,000,000 per day.

Firestone ALL-TRACTION TRUCK TYRES Give BETTER PERFORMANCE and CUT COSTS for on-and-off-the-road hauling, on farms, quarries and other places where dual-purpose tyres are needed.



DRIVE SAFELY

Firestone TYRES — consistently good

LONDON MOTOR SHOW

New Components and Service Equipment

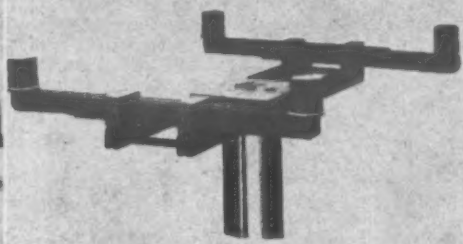
OPENED by the Home Secretary, Mr. R. A. Butler, on October 22 and due to end its run at Earls Court on November 1, the 43rd International Motor Show appeared during our own visits to be a more popular annual spectacle than ever. If attendance and genuine interest are indications, the "not unreasonable aim for one family in two to be running a car in about 10 years" suggested by Mr. Reay Goddes, president of the Society of Motor Manufacturers and

which has contributed so much to making Britain the leading builder and exporter of sports cars in the world.

Technical trends in the car world are generally similar to many in commercial vehicle design and are, of course, dictated by the same factors. The need for higher performance to meet modern traffic requirements has brought higher-powered engines, generally without increase in bulk and weight because of the need to preserve favourable power-



Harvey Frost universal jacking skates for positioning vehicles in congested spaces can be used for vehicles weighing up to 30 cwt.; right, new Laycock Hydralig with universal arms for lifting all makes of light vehicles



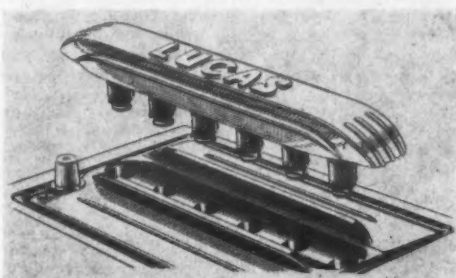
Traders, at the society's annual Motor Show dinner, would seem to be capable of achievement, insofar as the desire to own a car affects the issue.

Whether such a goal, which would be enormously beneficial to the industry in reducing production costs and becoming even more competitive in foreign markets, will ever be achieved rests on many factors, including a continuing rise in living standards so that more wage earners can afford the first cost and upkeep of a car and whether such an increase in the number of vehicles on our roads, already the most densely occupied in the world, can be accommodated without causing such congestion that road travel will become uneconomic and unattractive. The new motor roads now under construction will do much

weight ratios and thus conserve highly taxed fuel. In this last context, the Perkins 1½-litre Four 99 diesel engine, which is well shown and demonstrated at Earls Court, might well be on the verge of making a major incursion into the medium-sized car field, particularly where fleets of them are operated. Fuel consumptions between 50 and 60 m.p.g. have been obtained with the Four 99 in various popular cars in fast running in officially observed tests. The new Austin hire car shown by Carbodies has the successful B.M.C. 2.2-litre diesel engine as standard equipment. Joseph Lucas shows its progress with petrol injection, which permits the use of higher compression ratios resulting in greater engine efficiency.

Simplified Control

In order to relieve drivers of physical effort and preoccupation with controls, thus releasing maximum attention for dealing with traffic situations, such fittings as power-assisted steering, disc brakes and servos for drum brakes and automatic transmission have made ground. Despite the earlier belief that the type of automatic gearbox used in American cars, which incorporates the

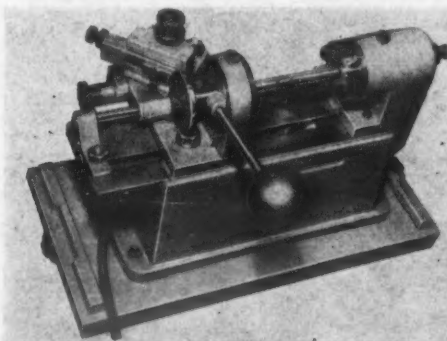


Patented one-piece manifold venting system for Lucas S7 battery

to improve cross-country traffic flow but will be of little use if complementary works are not undertaken to prevent vehicles becoming bogged down in the large urban areas that form the starting and ending points of most journeys.

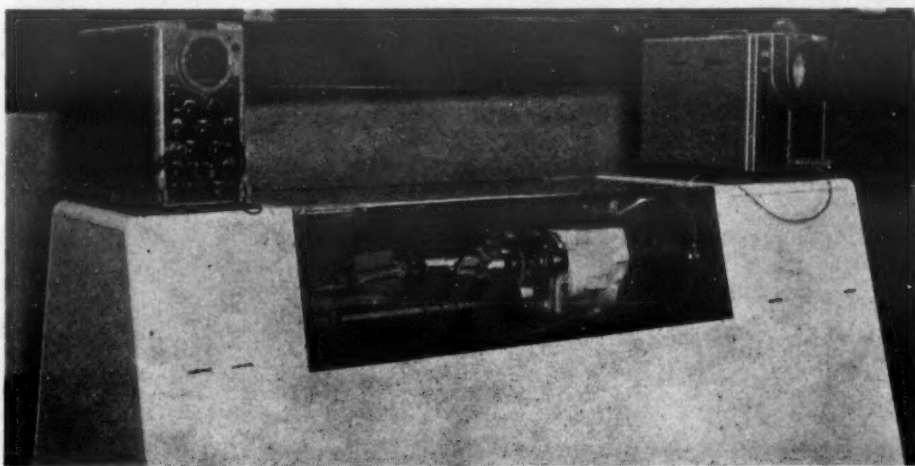
Reducing Costs

As far as keeping the costs of motoring down is concerned, the industry can be proud of its achievements and the present exhibition, like the recent Commercial Vehicle Show, abounds in evidence of attention paid to clean design and pretreatment and finishing techniques that reduce the effects of corrosion, components such as brakes, tyres and suspension units that make vehicles safer and thus reduce the possibility of accidental damage and servicing equipment of all types designed for greater speed and efficiency to reduce the cost of repair and maintenance. Certainly the industry has not yet produced a



Hunger refacing machine shown by E. F. Allchin resets valves by turning instead of the more usual grinding

relatively inefficient hydrodynamic torque converter or converter-coupling, would be unsuitable for all but the highest-powered European cars, a progressive invasion of the medium-power car field on this side of the Atlantic has been made by the Borg-Warner unit, which is now made in this country at Letchworth. A round dozen British



An inductive coupling in this test rig, developed by Birfield Engineering for investigating the effects of torque changes in Hardy Spicer propeller shafts, avoids the use of slip rings and gives great accuracy

"people's car" at an inclusive price around £350—though one prominent manufacturer still produces a full-size full-power small car at a basic price under £300—and indeed there is no real evidence that a mass market for such a vehicle, necessarily utilitarian in design and finish as it must be, exists. Such market as there is for this type of vehicle is adequately served by the growing number of makes of minicars, and even these we note are inclining away from their original concept of extremely low cost and climbing up into the price bracket of the conventional small car, over which it seems their sole remaining claims to superiority rest on fuel economy and manoeuvrability in congested conditions.

Tribute to British Craftsmen

Most spectacular car of the show is undoubtedly an Austin Healey of which all the bright parts, including individual screws, nuts and bolts, are heavily gold-plated, the steering wheel is of solid ivory and the upholstery of rare mink. The car, which was finally assembled by Jensen Motors, has been built by Mr. Donald Healey at a cost of £4,000 "as a tribute to British craftsmanship

manufacturers now fit the Borg-Warner transmission (it is standard on the new Austin taxicab and hire car) or offer it optionally, and experience is showing that loss of performance and fuel economy, where this is measurable, is more than offset by the relief from fatigue of driving and reduced maintenance costs.

The problem of automatic transmission for British cars of up to about 2 litres has apparently yet to be solved, though the Hobbs Mechanomatic unit looks about ripe for adoption by some enterprising manufacturer. Continental makers of the ultra-small cars—including the Netherlands newcomer, Van Doornes (D.A.F.)—appear more ready to dispense with the gear lever and clutch pedal than do our own designers. The promising Motor Industry Research Association hydromechanical automatic transmission appears not yet to have found a sponsor, which is rather disappointing.

Among the new components on show is a Clayton Devandre brake servo with diaphragm-actuated reaction valve for extra-sensitive control particularly useful for use with disc brakes. In a related field is an electrically driven vacuum

(Continued on page 10)

Cut your costs with the economical

COMMER-UNIPOWER

10 TON SIX-WHEELER

with Trailing Axle



- ★ Rootes two-stroke diesel engine, developing 105 b.h.p.
- ★ Bodyspace of 21 ft. 6 in.
- ★ Maximum gross vehicle weight, 15 tons.
- ★ 5-speed gearbox optional extra.

The 'Commer-Unipower' 10 tonner is based on the thoroughly proved Commer 7 ton chassis with its amazingly economical Rootes diesel engine, whilst in addition the wide use of Commer components in the chassis conversion facilitates servicing through the country-wide and comprehensive Commer Dealer Organisation.

BUILT STRONGER TO LAST LONGER

COMMER CARS LTD. LUTON

EXPORT DIVISION: ROOTES LTD. DEVONSHIRE HOUSE PICCADILLY LONDON W.1

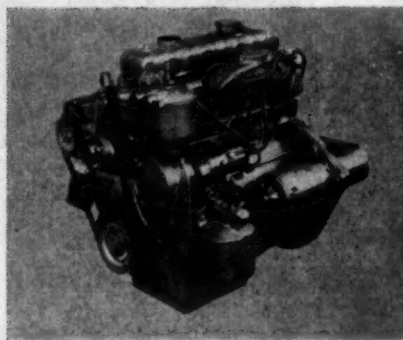
PERKINS FOUR 99

HIGH SPEED DIESEL ENGINE
FOR CARS AND LIGHT VANS.
DEVELOPING 43 bhp at 4000 rpm



The Four 99 has speed and acceleration plus the advantage of untiring power, proved efficiency, lack of vibration and quiet engine running at all speeds.

Amazing fuel economy, up to twice the mileage per gallon compared to petrol engines of similar capacity. R.A.C. certified consumption in Vauxhall Velox car 56.6 m.p.g. over test route of 218 miles. Similarly R.A.C. certified consumption for a Ford Consul was 50.8 m.p.g. at average speed of 34.7 m.p.h.



ENGINE DATA

Bore: 3" (76.2 mm). Stroke: 3¼" (88.9 mm). Cylinders: 4. Cubic capacity: 99 cu. ins. (1.62 litre).

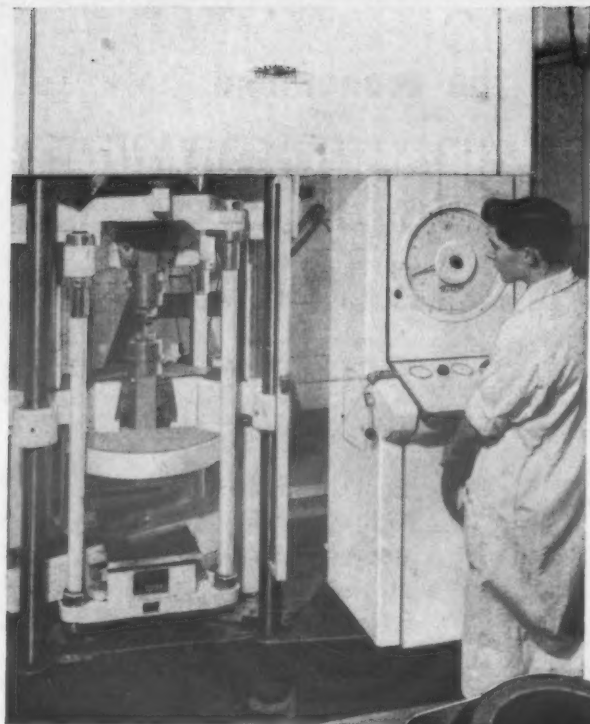
Comprehensive Service and
Spares facilities in 143 countries of the World



... FOR VEHICLE, AGRICULTURAL, MARINE
AND INDUSTRIAL APPLICATIONS

F. PERKINS LTD. PETERBOROUGH. PHONE: PETERBOROUGH 5341

164CV



it
all
adds
up
to
**COMPREHENSIVE
SERVICE**

Metallurgical Control of Raw Materials . . .

The finished product can never be better than the raw material allows: in addition to metallurgical control right from the start, FORGINGS AND PRESSWORK LIMITED offer a comprehensive service including—

Up-to-date Plant and Production Facilities
Design Consultation and Technical Advisory Service
Heat Treatment under Laboratory Supervision
Constant Vigilance and Modern Inspection Equipment.

This Company participates in the technical, research, and productive resources shared by the whole Birfield Group, which includes famous firms such as Hardy Spicer Ltd., Laycock Engineering Ltd., The Phosphor Bronze Co. Ltd., and other companies well known in light engineering.

FORGINGS AND PRESSWORK LTD

BIRCH ROAD • WITTON • BIRMINGHAM 6 • Phone: Birmingham East 1262-7

Automotive Division of Birfield Industries Ltd., Stratford House, London W.1

Member of the



Birfield Group

Precision

FIRST AND LAST



Pressed Steel

In the last ten years, Pressed Steel have produced enough railway wagons to make a train 300 miles long. Wagons of all kinds and all gauges for home and overseas. But sheer capacity—the ability to meet big orders and meet them quickly—is only half the story. The other half is just as important, even though it cannot be expressed in statistics—the finish, the painstaking attention to detail, the skill and experience of the men you see here.

PRESSED STEEL COMPANY LIMITED

Railway Division: Paisley, Scotland. Head Office: Cowley, Oxford. London Office: 109 Regent Street, W.1.

Manufacturers also of Motor Car Bodies, Prestcold Refrigeration Equipment and Pressings of all kinds.

NEWS FROM ALL QUARTERS

Lines and Stations Closing

The Eastern Region is to withdraw passenger-train service from Branston and Heighington Station (on the Sleaford—Lincoln line) from November 3. The section of line between Picton and Stokesley in the North Eastern Region will be closed on December 1 and on November 3 the Western Region will discontinue passenger service between Gloucester and Cinderford; also, the Totnes—Ashburton branch will be closed to passengers.

Diesel Feeder Train for Businessmen

Following requests from industrialists and business executives on Tees-side for a rail service which will enable them to keep luncheon appointments in London, a new diesel railcar service, the Tees-Thames Link, commenced experimentally on October 27. It leaves Middlesbrough at 6.48 a.m. calling at Thornaby, Eaglescliffe and York, to arrive Doncaster at 8.37 a.m., giving a connection with the 8.51 a.m. due to arrive Kings Cross at 11.40 a.m. The new service also affords connections to Leeds and Manchester.

By-Pass for Harlow New Town

The £600,000 by-pass (a 33-ft. wide single carriageway) for Harlow and Potter Street on the London—Norwich trunk road, A11, is to be started shortly. It will run from a point at Potter Street to Harlow Station bridge, a length of about three miles and about one quarter-mile of the existing road to the north will be improved. The work will involve reconstruction of the railway bridge at Harlow Station. Immediately to the south of the by-pass the existing road will be straightened and widened for about half a mile.

Elevated Motorway Design Criticised

Middlesex County Highways Committee has recommended to the county council that it should object to the proposed design of the South Wales Motorway on the ground that it will prove inadequate to traffic expected within five to 10 years. The Chiswick—Langley section of this motorway, the proposed line of which was published recently, would, the committee thinks, be inadequate because it provides only four lanes on the elevated section instead of six; also, concern is expressed at the small radii of certain curves. The committee suggests that it might be preferable to revert to the original line of route laid down in the county development plan.

Glasgow Parking Ban Starts

Extension of no-waiting regulations to 80 additional streets in the centre of Glasgow came into effect on Monday this week. Unilateral waiting will be applied to these streets. The net effect is that there will be authorised parking space for less than half the 5,000 cars hitherto parked in this area. For their benefit some 3,787 parking spaces have been provided within a radius of one mile of Union Street. No-waiting regulations will also be enforced on a number of main approaches to the central square mile. There was a striking reduction in the number of parked cars on the first day of operation, but police are reserving judgment until a later date.

Krauss-Maffei Licences for U.K.?

The West German locomotive manufacturer Krauss-Maffei A.G., of Munich, has announced that it has come to an agreement with "three leading British locomotive builders" under which the latter will be licensed to produce diesel engines on the German pattern to meet the requirements of British Railways.

Railway Productivity Bonus

A productivity bonus equivalent to about 3 per cent of their wages has been awarded to French railwaymen. The bonus represents a proportion of the savings in operational expenditure made by French Railways in 1957 and is made retrospective to January 1, 1958. For the lowest-paid worker in the Paris district it will amount to almost £1 a month. But railwaymen are still pressing for a response to claims for general wage increases to compensate for the rise in the cost of living.

One Advertiser Throughout Train

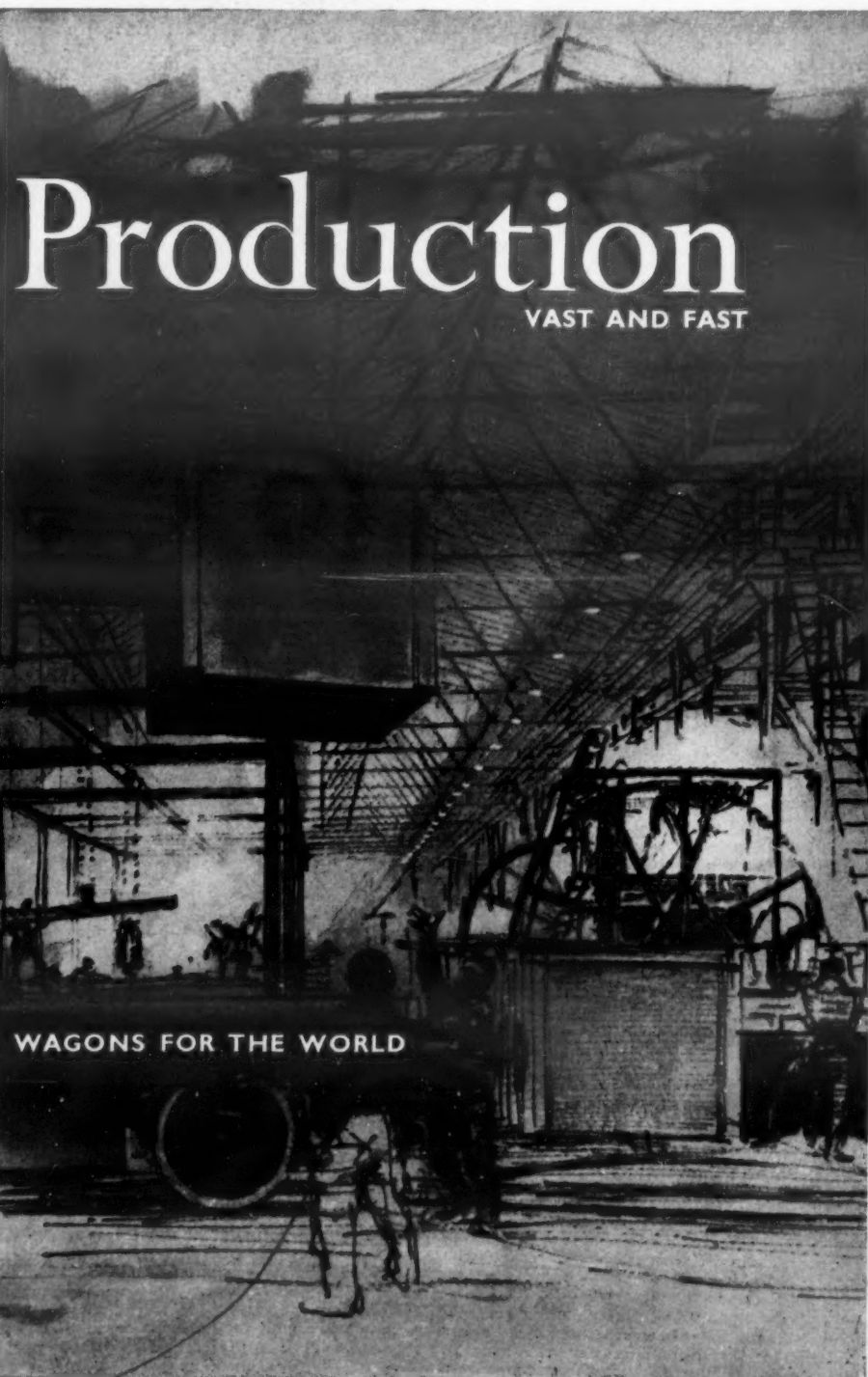
For the first time on the London Transport Underground, advertising space in the trains is being sold en bloc. The British Transport Commission has sold for a full year every space in the first of the three silver (unpainted aluminium) prototype trains on the Piccadilly Line to the London and Manchester Assurance Company. The display consists of 230 advertisements. The advertising space in the two other prototype trains now on trial on the Piccadilly Line have also been sold by complete train.

Humber Bridge Preparations

The draft of the Humber Bridge Bill has been completed and the next step will be consideration of the draft Bill at a special meeting of the Hull City Council, after which a public meeting will be held. It is intended that the bridge should be managed by a Board consisting of representatives of the various local authorities. Scunthorpe, Haltemprice, and Barton-on-Humber representatives are hoping their Councils would become members of the Board. They would, therefore, have certain financial responsibility should there be a deficiency in the running of the bridge.

New Ironstone Field in M. and G.N. Area

At its hearing of objections to the British Railways plan to close wholly to passenger traffic and partly to goods traffic 175 miles of railway from Saxby, Leicestershire, to the Norfolk coast, involving the former Midland and Great Northern Railway system, the East Midland Area Transport Users Consultative Committee was told this week that a new field of ironstone, said to be as good as, if not better than, any in the country, had been discovered in South Kesteven, Lincolnshire. Eighty-five borings by United Steel Companies and Stewarts and Lloyds had shown very good strata, it was stated. It was urged that if mining took place there would be greatly increased traffic for the railway. But Mr. H. C. Johnson, general manager, Eastern Region, British Railways, replied that they had consulted the British Iron and Steel Federation on this question, and the Federation had no objection to the rail closure.



COMMERCIAL AVIATION

Aer Lingus Plans Expansion

AMERICAN AIRLINES PROFIT

PLANS of Aer Lingus for next summer provide for the opening of new Continental services linking Dublin for the first time with Scandinavia and Portugal. From April next it is proposed to operate two flights weekly on a Dublin—Manchester—Düsseldorf—Copenhagen route. From June 1, a weekly Dublin—Lourdes—Lisbon flight is planned. The Dublin—Lourdes—Rome route will again operate in the summer of 1959, and with the new Lisbon service, will provide direct air routes to the shrines of Lourdes, Fatima and Rome. Another new route planned for next summer is Dublin—Paris—Zurich—Rome. All are subject to the approval of the Governments concerned.

London—Caracas Service Starts

The London—Caracas service of the British Overseas Airways Corporation which was to have started on October 16 (MODERN TRANSPORT, October 18), but was prevented by the unofficial strike at London Airport, began on October 27. It is the first turboprop service to operate between Europe and South America.

Croydon Airport Users

The Joint Parliamentary Secretary to the Ministry of Transport and Civil Aviation, Mr. Airey Neave, met the Croydon Airport Users Association on October 22. There was a general discussion, in the course of which the association explained the great difficulties which it saw in accepting the Ministry's offer to make available limited facilities at Biggin Hill after Croydon Airport has been closed.

New Services Approved

The Minister of Transport and Civil Aviation, after considering the recommendations of the Air Transport Advisory Council, has approved the operation of the following services:

An internal service between Blackpool and Belfast; Silver City Airways, Limited, until August 31, 1963.
An internal service between Newcastle and Belfast; B.K.S. Air Transport, Limited, until January, 1965.
A normal scheduled service between Bournemouth (Hurn) and Brussels (National); Independent Air Travel, Limited, until September, 1958.
A normal scheduled service between Ipswich (optional)—Southend—Antwerp; East Anglian Flying Services, Limited, until March 31, 1961.
An internal service between Oxford (Kidlington) and Jersey; Derby Aviation, Limited, until May 31, 1964.
A normal scheduled service between Jersey and Palma; B.K.S. Air Transport, Limited, until March 31, 1959 (approval until September 26, 1965, is subject to the continued approval of the Spanish Government).

Short SC1 Makes Free Take-off

The Short SC1 VTOL research aircraft made its first free vertical take-off and landing at Belfast on October 25. The aircraft, which was flown by Mr. Tom Brooke-Smith, chief test pilot of Short Brothers and Harland, Limited, took off from a small metal platform. It rose straight up to a considerable height and for a while hovered motionless. Then, under complete control, it moved forward for some distance before making a perfect vertical landing on the runway. This was the first time that the aircraft had flown outside its specially built test gantry in which hovering trials have been in progress for the past two months. It made its first vertical take-off in August while tethered to the gantry platform.

T.C.A. Increases Winter Services

Trans-Canada Air Lines increased its Super Constellation service on Southern and Caribbean routes when its winter schedule took effect on October 26 and for the first time Nassau and Montego Bay are on this service. There will be a total of three daily flights to Tampa during the peak season; seven flights a week to Bermuda; six to Nassau; five to Jamaica (including Kingston and Montego Bay) and two weekly to Barbados and Trinidad. The transatlantic flight frequency is also increased this winter with a total of 10 weekly flights compared with eight last year. At the same time T.C.A. has announced a very substantial increase in its domestic transcontinental tourist accommodation compared with last winter's schedule and 40 per cent of the total transcontinental capacity is tourist class. These routes are served by five daily Viscount flights, three Super Constellation and three North Star tourist flights.

Swissair Winter Programme

Among features of the Swissair winter schedules which take effect on November 1 are the extension to Buenos Aires of the Thursday flight to South America, nine services weekly to North America all operated by DC7Cs, the introduction of a new DC6A aircraft on all-cargo flights to New York via Manchester, and a new weekly call at Bahrain on the Far East route. From November 27 the Thursday Superswiss service to South America which terminates at Sao Paulo will continue direct from Sao Paulo to Buenos Aires. In the reverse direction it will leave Buenos Aires on Saturdays. Swissair will thus serve Buenos Aires twice weekly, the Sunday flight from Europe continuing to call at Montevideo. On the North Atlantic all flights will be operated with DC7Cs from November 24. Nine services weekly will be flown, of which five will stop westbound at Shannon. Four services in each direction will go via Lisbon. Cologne will be served four times weekly westbound and three times eastbound.

American Airlines Results

American Airlines recently reported net earnings of \$10,889,000, exclusive of profit on the disposal of property, for the nine months ended September 30, 1958. This is equivalent, after dividends on preferred stock, to \$1.33 on the average number of shares of common stock outstanding during the period. In addition, there was a profit (net after tax) of \$2,436,000 from the disposal of property. Total net earnings amounted to \$13,325,000, compared with \$10,148,000 for the first nine months of 1957 when there was a profit of \$1,264,000 (net after tax) from the disposal of property. Provision for obsolescence and depreciation for the first nine months of 1958 amounted to \$14,610,000 (\$14,924,000). As from January 1, 1958, the company also adopted the policy of capitalising interest on deposits with manufacturers for the purchase of flight equipment; this increased first nine months net earnings, after taxes, by \$700,000. During the period American Airlines carried 5,931,000 passengers a total of 3,851,967,000 revenue passenger-miles. This represented a decrease of about 2.3 per cent compared with the 3,943,455,000 revenue passenger-miles for the same period last year. The 69,723,000 ton-miles of air freight represented an increase of 7.9 per cent over the same period last year.

PRESIDENT OF I.A.T.A.



J.R.D. Tata

Mr. J. R. D. TATA

The president of the International Air Transport Association, which this week has been holding its annual meeting in New Delhi, is one of the select band of airline executives with practical experience of commercial flying. Born in Paris on July 29, 1904, Jehangir Tata was educated in India, France and Japan and at the age of 18 joined the family industrial organisation as a junior assistant. While engaged closely with these widespread interests, he nonetheless took a keen interest in aviation and when, in 1929, he qualified in India as a pilot he was the first so to do. Three years later he took his transport rating and he was the first Indian to fly an aircraft from India to London. The founder of Tata Airlines, he flew the first scheduled internal air service on a commercial basis from Karachi to Bombay in 1932. It may be added that he continued to hold a transport licence until 1949 and it is only two years since he ceased to renew his private licence. In 1938 Mr. Tata became chairman of Tata Sons, Limited, the main holding company of an organisation handling things ranging from steel to cotton textiles, from electricity to motor vehicles, and from soap to hotel management. When Air India, Limited, was incorporated in 1946 to take over Tata Airlines he became chairman, taking up a similar office with Air-India International when that was formed to operate intercontinental services. When air transport was nationalised in August, 1953, he was appointed chairman of the Air-India International Corporation and a member of the board of the Indian Airlines Corporation. He was a member of the Indian delegation to the third session of the United Nations General Assembly in Paris in September, 1948, and in 1955 was awarded the Padma Vibhushan by the Government of India in recognition of his services to the country—he had in the previous year been made an officer of the Legion of Honour by the French Government. Mr. Tata holds an honorary commission as group captain in the Indian Air Force and the honorary degree of D.Sc. of Allahabad University. The National Association of Foremen of the United States awarded him the title of "International Management Man of the Year" in 1953.

AIRLINE COSTS

Effect of Jet Aircraft

LOWER FARES?

WHEN the fourteenth annual general meeting of the International Air Transport Association opened in New Delhi on Monday of this week it received, as is customary, the report of the director-general, Sir William Hildred. During 1957 world airline traffic had continued to increase and scheduled operators had carried 87 million passengers for a total of 82,000 million passenger-kilometres. This represented a 13 per cent increase in passenger traffic and a 16 per cent increase in passenger-kilometres over the 1956 figures, while freight and mail had increased by 11 and 7 per cent respectively. The business recession slowed down the normally rising traffic curve a little during the latter months of the year, but its effects were mostly manifest in the domestic sector of the industry. In any event, earlier increases in traffic were more than sufficient to compensate. Declaring that the airlines "regard the jets as a challenge and an opportunity," Sir William said "we look forward with hope and confidence to meeting the one and realising the other." While airlines had done 14 per cent more work and handled 17 per cent more money in 1957, their expenses had gone up 25 per cent and their operating profit seemed to be down by 40 per cent. He estimated that their total 1957 revenues were \$4,100 million, as against operating expenses of \$4,050 million, leaving a net margin of only \$50 million, or 1.2 per cent. Revised 1956 figures showed an operating profit of \$84 million, or 2.4 per cent, on revenues of \$3,510 million.

Too Successful?

"Despite these figures, the consistent aim of the 86 airlines comprising I.A.T.A. has been to lower the fare, whilst increasing the comfort and safety of air transport, and to bring air travel within the reach of increasing numbers of the world population at lower and lower income levels." By doing this, the airlines had increased traffic from 16 million passengers in 1946 to 87 million in 1957. "Some may say that in view of the financial result we have been too successful, but I think this is not the case. We are, in a sense, investing in the development of a habit of travel among people who have not flown before; and as that volume takes progressive hold, we shall eventually reap our rewards in volumes great enough to compensate for the reduction in unit revenues."

Over the North Atlantic route, where fares had been reduced by 30 per cent over the last 10 years, air traffic now equalled the passenger carrying of the steamships and might exceed it this year. The new economy class fares on that route had been well received by the public to the point where almost 60 per cent of scheduled traffic on the route now moved at the lowest fare. While the economy fares had undoubtedly diverted some passengers from the tourist services of the airlines, the director-general believed that there had been many more who could not have thought of travelling but for the introduction of this latest low fare. "A lower one would be still better received."

Effect of Large Aircraft

Pointing out that the airlines now have on order almost 900 new jets and turboprops, worth nearly \$3,000 million (U.S.), he summarised the background to their decision. "For the first decade following the war, our fare reductions have largely been rendered possible by the fact that each succeeding generation of piston-engined equipment was more efficient than its immediate predecessor, producing a little more capacity at a slightly smaller cost. That period has come to an end. Although the latest types are faster, bigger, more handsome and comfortable, their costs per seat mile showed no appreciable reduction. "Turbine powered aircraft represent a very definite technological advance and they promise a lower cost per seat mile. How quickly that promise is realised depends on the operational experience of the next few years, on the extent to which they are given the kind of supporting services which their economical operation requires, and on the effort which we and our partners in interest put into developing the maximum amount of traffic at any given level of price penetration into the mass market. We want that price to be as low as possible."


Advance Planning

There had been a very great deal of advance planning by the airlines, both individually and in concert and thanks to exchange of technical information, no one would be going it alone: every pilot who took the controls of a jet would have had the full benefit of everything that anyone has found out about these machines through millions of hours of research, test and actual flying. Greater attention needed to be paid to the development of cargo traffic, because many piston-engined aircraft now carrying passengers and fill-in cargo would be transferred to all-cargo service when the jets replaced them. Tomorrow there would be a flood of cargo space and air freight would have to be considered as a traffic which must stand on its own feet and earn its own way. Positive control of air space, at all times, in all weathers and for all aircraft, civil and military, was an urgent necessity now that fast jets had been introduced into the traffic pattern. Sir William asked governments to accept the principle that all aircraft be required to fly on instrument flight rules, with separation maintained under instruction by ground control, to integrate civil and military traffic control systems and to provide whatever additional services might be needed to fill the gap.

The annual report of the New Zealand national Airways Corporation states that its Viscount service had generated much new traffic between Auckland and Christchurch. It has become necessary to cancel the plans for using the Viscount 800 as a 52-seater with eight seats in reserve for peak traffic, and to run it on two round trips a day as a 60-seater on all flights. A passenger payload of 74 per cent was achieved in the period under review, and the report adds that serviceability has been of a very high standard. N.Z.N.A.C. will take delivery of two more Viscounts early in 1959 to take advantage of the completion of the airfield for Wellington and later for Dunedin. Trans-Australia Airlines also reports more Viscount success. In a record year, when 841,125 passengers were carried, well over 500,000 of them flew in Viscounts. The airline had a 6 per cent passenger traffic increase on the year 1956-57 and made a profit of £282,702 which represents a 64 per cent return on capital.

London Motor Show

(Continued from page 7)



B.A.A.
BATTERY ACID

Gives you
dependable service

F. W. Berk & Co. Ltd.
STRATFORD, LONDON, E.15
Telephone: MARYland 6644



SUPERFINE COACH FINISHES

'PARSOLAC'
Alkyd resin finishes
for brushing and spraying

'PARSONLOID'
Cellulose finishes
in all colours and polychromatic

PARSONS HALF-HOUR LACQUER
New type lacquer—
needs no polishing
for all types of
Commercial, Passenger and Goods Vehicles
Ensure a sound foundation with

PARSONS PRIMERS & FILLERS

THOS PARSONS & SONS LTD
ESTABLISHED 1802
70 GROSVENOR ST., LONDON, W.1. MAYFAIR 7951

BRANCHES: Beaconsfield . Birmingham . Brighton
Cardiff . Cheltenham . Cork . Dublin . Edinburgh
Glasgow . Hanley . Leeds . Manchester . Newcastle-on-Tyne
Nottingham . Plymouth . Southampton

WORKS: Church Road, Mitcham, Surrey . Mount Shannon
Mills, Inchicore, Dublin . Hillington, Glasgow

exhauster with automatic cutout and dual control for trailer brakes introduced recently for light diesel-engined vehicles by Feeney and Johnson. A brand new fabric for car upholstery is introduced by Courtaulds at the show. Named Duracour, it is a spun-dyed yarn treated with a newly developed permanent finish that renders it mothproof, burn-resistant, easily washable and extremely tough.

What is claimed to be the most advanced telescopic suspension damper in Europe is a new unit designated C.S.V. shown on the Girling stand. With a range of bore sizes from 1 in. to 1½ in., the C.S.V. damper has new valves, interior parts of superior finish and various other improvements which are said virtually to eliminate temperature fade and the need for maintenance; it is suitable for all makes of cars and light commercial vehicles. Hallam, Sleigh and Cheston shows new seats incorporating adjustable backs and a Perspex-top roof ventilator with three-position adjustment.

Power-Steering Pump

The recently introduced Hobourn-Eaton engine-driven pump for power steering with integral flow and relief valves can be seen on that company's stand. Exhaust valves of the new 21-4NS steel alloy, which are claimed to have a life of 200,000 miles, are shown by W. G. James. Other recently introduced components designed to increase the life of high-efficiency engines are K.L.G. FE and FE75 sparking plugs and Laystall Engineering Cromard thin-wall cylinder liners. A new Lucas battery, the S7, with one-piece manifold venting system is evidence that design even of old-established components never reaches finality and that ways can still be found of reducing the time spent on essential maintenance tasks.

Smoother running of the higher-compression engines now coming into use and reduction of vibration transmitted to the vehicle are the targets of many of the range of bonded rubber-to-metal components shown by Metalastik, which includes a new crankshaft torsional vibration damper and fan pulley assembly. A new compact six-speed gearbox by Moss Gear Company incorporating over-drive, intended for cars with engines of up to 3½ litres, might well be of interest to builders of medium-weight diesel-engined commercial vehicles faced with the necessity of increasing vehicle speed range for motorway operation. New Purolator dry-type air filters, which are easily installed and easily serviced and conform to British Standard requirements, specially designed for vehicles having restricted under-bonnet clearance are shown by Automotive Products Company.

Useful Performance Checks

Several useful devices for checking vehicle performance are on view, the most comprehensive mobile unit being a recording Bowmonk Dynamometer. This is an improvement on the instrument introduced by Bowser, Monks and Whitehouse last year which incorporates a recording needle to retain the maximum reading obtained for each function of acceleration, braking, tractive resistance and gradient that the Dynamometer is designed to check. A new owner-driver kit for detecting engine faults and tuning for maximum performance is introduced on the Redex stand, while

Crypton Equipment shows a new Mini-Test engine tester as well as its comprehensive range of larger engine testing equipment.

For diesel engines, Merlin Engineering displays its new R2 Servicemaster for injector reconditioning and R6 Calimaster fuel pump test bench with electroscopic phasing and Leslie Hartridge has on show its improved nozzle analyser with built-in fume exhauster and patented time-pressure recorder and new Major test bench with simplified speed variation. A precision compression tester suitable for use with most makes of diesel engines is shown by Lawrence Edwards and Company. Morris and Ingram shows the recently introduced diesel injection test pump and Handilap injector service tool.

Group Research

The numerous products of the companies of the automotive division of Birfield Industries, which include the Phosphor Bronze Company, Forgings and Presswork, Salisbury Transmission, Laycock Engineering and Hardy Spicer, are well shown on a group stand as well as on separate stands by Bound Brook Bearings and Laycock (garage equipment). An interesting feature of the group stand is an illustration of the research and development work undertaken for the whole group by the new company, Birfield Engineering, formed last year for this purpose and to undertake the design of prototypes for testing. Much of the research and development company's work is carried out on test rigs of its own design and one of these for the investigation of the effects of changes of torque on a Hardy Spicer propeller shaft is demonstrated.

Introduced by the Pyrene Company is a new Cold Bonderite system for spray pretreatment plants, a system firmly established in the United States and now made available in this country. Cold Bonderite is designed primarily for treating steel by spray application but both steel and most types of zinc surface can be treated in the same solution. Chemical costs are said to be no higher than with conventional processes and production-line experience has shown that steam costs can be reduced by 70 per cent, water consumption cut by 20 per cent and that maintenance time and labour costs are also appreciably lower.

JOHN BULL TRADING POLICY

HITHERTO distributed only through bona fide service garages, John Bull tyres are in future to be handled in the same way as other makes through recognised tyre distributors and factors and all classes of dealer listed in the Tyre Trade Register. The John Bull Rubber Co., Limited, is to introduce early in 1959 a completely redesigned and extended range of larger tyres in sizes up to 10-in. sections and various ply ratings. A number of the company's district stock premises have been closed, their place being taken by four depots in London, Bristol, Leeds and Glasgow to be opened shortly, each of which will be self-contained and carry a complete range of tyres and other John Bull accessories.

TRAMCAR CONVERSION
Engineering Car and Mobile
Power Station

WITH the aid of a prewar 8.6-litre Leyland diesel engine, Blackpool Corporation Transport Department has converted a double-deck tramcar to a combined engineering car and mobile power station which can be operated when overhead current is not available. Its duties include the repair and renewal of overhead wiring, pushing or towing immobilised tramcars, and feeding a dead section of the overhead wires with power from its dynamo to keep the service in operation during an emergency. The diesel engine has already covered 450,000 miles in a Titan double-deck bus of the corporation's fleet and is now coupled to a 30-year-old Mather and Platt 75-h.p. electric motor now running as a dynamo. The power collected from the overhead wiring system



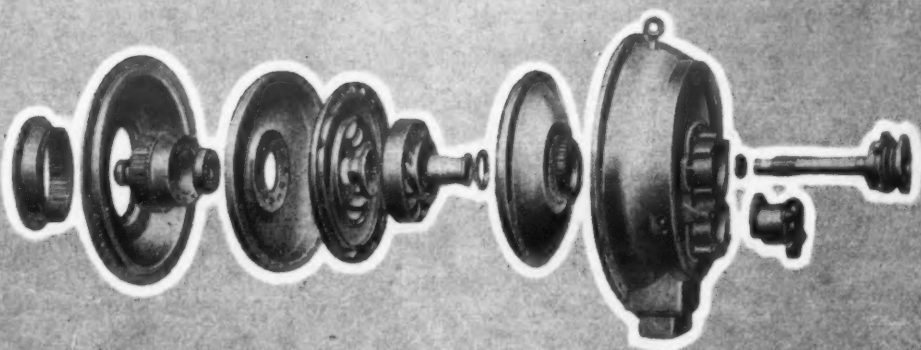
The converted 1924 Blackpool tram now powered by prewar Leyland diesel engine for overhead line attention

can be replaced by that supplied by the diesel-electric unit to supply current to the two 35-h.p. traction motors. When this is done, the car can be controlled in exactly the same way as a normal tram.

As an engineering car, it has already met one need on the 13 miles of enclosed sleeper track between Blackpool and Fleetwood, where motor tower wagons with normal road wheels cannot run. To enable the linesman to reach the centre traction poles from either track on this stretch of line, an insulated working platform with a hand-operated turntable has been mounted on the top deck of the car. A small workshop has been constructed in each of the enclosed ends of the top deck. Little power is required, as the tramcar coasts along many stretches of the track. The Leyland engine consumes around 20 pints per hour when coasting and around 30 pints per hour when running under full load.

A range of Hydraulic TORQUE CONVERTERS

3-1 TORQUE MULTIPLICATION



FROM

80_{H.P.} - 600_{H.P.}

Based on the Schneider System used and proved in service the world over

SIZES

13"

15"

16"

17"

18"

19"

Suitable for Rail Traction, Automotive, Earth Moving and Industrial Applications, etc.

The Torque Converter is ideally suitable for operation in conjunction with the Wilson Gearbox

Manufactured by the Transmission Specialists

**SELF-CHANGING GEARS LTD**

PATENTEES AND MAKERS OF WILSON GEARBOXES

LYTHALLS LANE

COVENTRY

ENGLAND

WRITE FOR LITERATURE ON OUR TORQUE CONVERTER

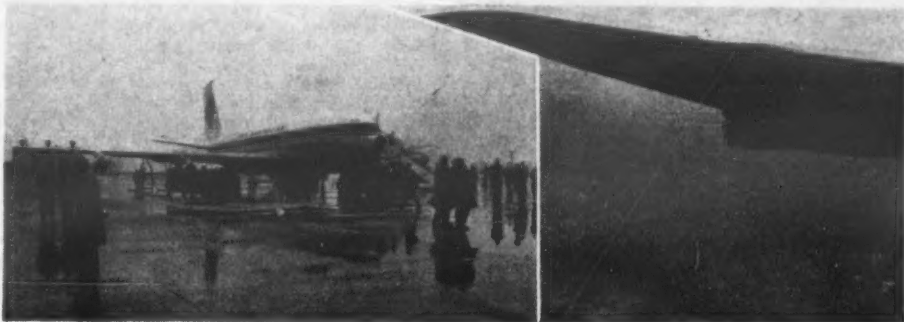
BY BOEING TO NEW YORK

Impressive Performance of Large 707 Jet

FORETASTE OF P.A.A. SERVICE

FLYING to New York last week in the Pan American Airways Boeing 707 *Clipper Mayflower* there was sitting next to us a French journalist who spoke only a few words of English and then not in any connected way. He brooded for some time upon a title for his story and finally settled for "Le Jet Age." Although the use of jet-engined aircraft for scheduled services is by no means a new development in the light of experience with de Havilland Comets and the Soviet TU104, there is no doubt that the appearance of the jet on the unique North Atlantic route has aroused a great deal of public interest. A month ago the British Overseas Airways Corporation began a weekly service with Comet 4s, but found it necessary owing to labour troubles to suspend this until mid-November, when it resumes with daily operation. Meanwhile Pan American, which had already announced plans for the introduction on October 26 of a daily jet service

informed after take-off that the aircraft was proceeding to Keflavik, in Iceland, and that we should be flying at a height of 32,000 ft. after reaching 22,000 ft. in the region of Prestwick. The take-off weight was 211,000 lb. and the take-off run was, in fact, the shortest at 35 sec. that we had. As things turned out there was a headwind of close on 100 m.p.h. and the flight time was 2 hr. 45 min. as against an estimate of 2 hr. 37 min. Weather was clear at the height at which we flew and the 110 passengers—the present seating arrangement provides for 40 first class and 71 economy—had an excellent luncheon on this sector. In view of the comment that has been bandied about on the subject of the external noise made by the Boeing, it must be said categorically that inside the aircraft the noise level is very reasonable. The only aircraft with which it is possible to make a comparison is the de Havilland Comet 4 and here the basis cannot really



The Pan American Airways Boeing 707-121 "Clipper Mayflower" makes a refuelling stop at Keflavik; right, the noise suppressors on the port outer engine taken while over the southern tip of Greenland

between New York, Paris and Rome, had continued to work towards that end. In the upshot when the service started this week it was only between New York and the French capital in view of the Italian desire to impose surcharges on passenger fares by jet. The New York—London service starts on November 16, by which time all six aircraft should be available.

Two Versions on Order

The Boeing 707 is a large aircraft whether viewed from outside or in and certainly one of the first impressions one gets on entering the aircraft is that it seems all of its 12-ft. width, even in the rear cabin with its three-and-three economy-class seating. It is, of course, fairly widely realised that the first six of the 23 Boeings which Pan American has on order are the 121 model with four Pratt and Whitney J57 engines giving 13,000 lb. thrust each and installed in pods under wings with a total span of 130 ft. 10 in., whereas the remainder will be the Intercontinental version with the 15,000 lb. thrust J75 engines, a wing span of 142 ft. 6 in. and a fuselage 1 ft. longer at 145 ft. 6 in. The maximum take-off weight for the 121 is 247,000 lb. and for the Intercontinental 295,000 lb. at present with a possibility of a further increase.

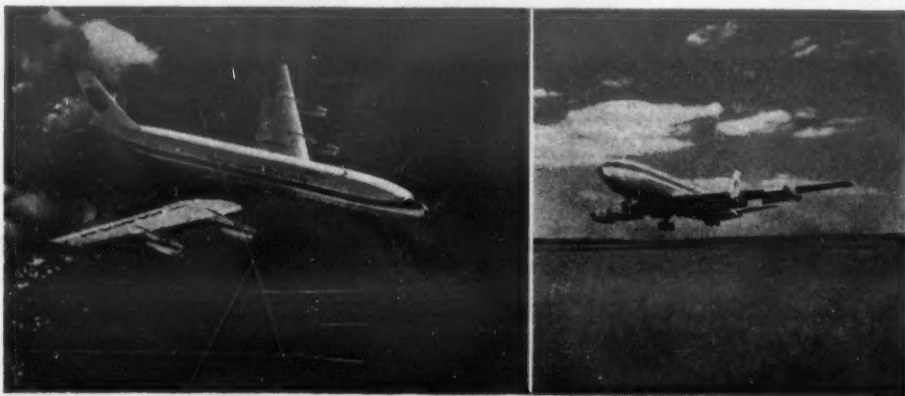
These differences result in an increase of 3,800 U.S. gal. in the fuel capacity to 21,200 gal. and the range and load both improve in consequence. With the 121 on which we flew, and which will be maintaining the transatlantic services for the next few months, the range of 4,400 miles means

be similar. Nonetheless it is reasonable to say that the Boeing is a little quieter aft of the main wing and a little noisier forward thereof. This noise is not that of engines but rather of air flow.

From Keflavik to New York the flight plan estimated a duration of 5½ hr. at 24,000 ft. The aircraft took off with a load of 247,000 lb. after a 47 sec. run on the 10,000-ft. runway and climbed steadily to reach 24,000 ft. in 29 min. Normally this would be a somewhat low cruising height, but there was every reason to expect even stronger headwinds than those of 80 knots which we were meeting if we climbed any higher. This longer sector gave more of an opportunity for testing the comfort of the economy-class seats. The space is, of course, somewhat restricted, but it is nonetheless quite endurable. The seats can be adjusted to a limited degree without inconveniencing occupants of the row behind. Time from take-off to our touchdown at Idlewild, or, to give it its full title, the New York International Airport, was exactly 5 hr. 30 min.

Eastbound Flight

As was indicated earlier, our take-off from New York eastbound was made on other than a normal jet runway, a fact which may have accounted for a long delay at the end of the runway before receiving permission to start the take-off run. Length of 13R is 9,500 ft. and the captain estimated that we had 2,000 ft. to spare when we became airborne. The weather, which had been unkind for most of our 48 hr. in New York, was still unhelpful and we saw nothing of the New



The 707 seen from above during a training flight and, right, at take-off

that westbound flights are normally scheduled to make a refuelling stop. The aircraft are, moreover, at present flying under certain restrictions of all-up weight due partly to take-off performance requirements at certain airports and also to permitted runway loading stresses. Thus returning from New York to London when we took off from Idlewild in 13R we were limited to 239,000 lb. The flight plan envisaged landing at Shannon, but an improved forecast for London led to a decision to take on extra fuel so that we could make the flight nonstop if the promised improvement materialised. The fuel brought our weight up to the permitted maximum for that runway.

Airport Requirements

It may illustrate some problems that confront the operators of jet aircraft if the operational procedures for take-off on 13R are cited. These were proposed by B.O.A.C. for the Comet 4 and were accepted. Those for the Boeing 707 are comparable. The point should first be made that this particular runway is considered for use only when 22 and 25 are not suitable. For 13R the pilot makes a turn to starboard as soon after take-off as practicable, this turn being made with approximately 15 deg. bank. In addition the pilot has to see that the aircraft does not fly over any community underlying the flight path at an altitude of less than 1,200 ft. A further complication which did not arise could have been occasioned by the contemplated call at Shannon, where, until work on the runways has been carried out, the Boeing lands or takes-off under severe restrictions.

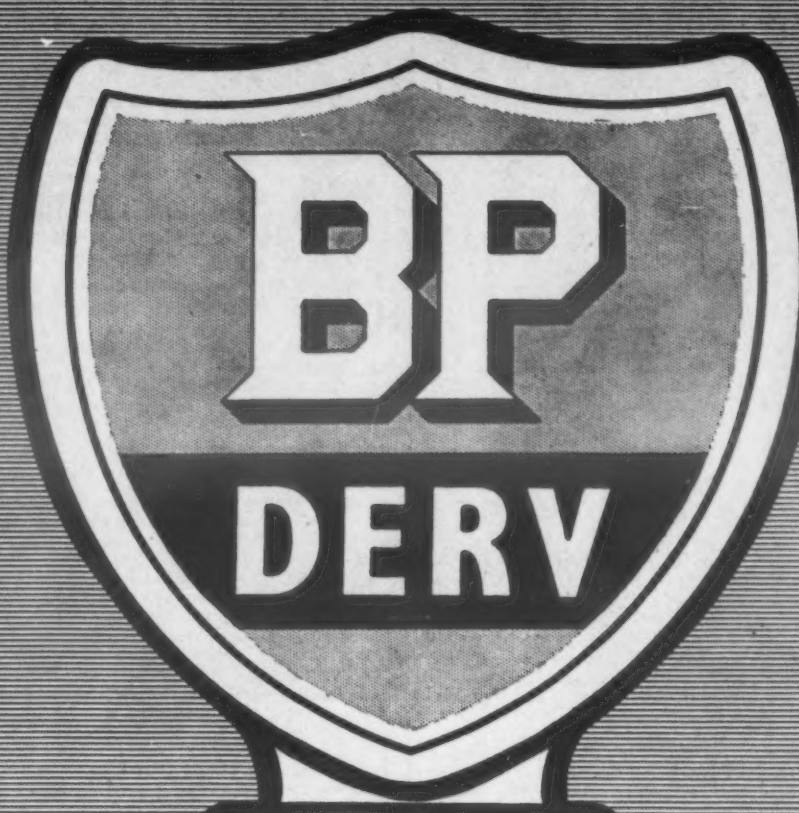
On the outward flight from London we were

England coast. Indeed we saw little but a thick layer of cloud all the way over to London. Our height was given in the flight plan as from 23,000 to 35,000 ft. and our destination was Shannon.

In the upshot we passed above that airport 5 hr. 53 min. after take-off. This was a little slower than the estimated flight time, but we had had an unusually feeble tailwind—30 knots at best—and could not complain. At 5.12 a.m., when we were above Shannon, we heard that the weather at London Airport was approaching the minimum horizontal visibility we required of one mile and that the cloud base had lifted. We went on to land beautifully for a flight time of 6 hr. 42 min. This compares with the scheduled 7 hr. 35 min. for the service when it is introduced in a fortnight's time, although it should be pointed out that the times calculated for flights in both directions allow for a refuelling stop. Normally this will be at either Keflavik or Gander, with the former favoured for westbound and the latter for eastbound flights.


Impressive

There can be no doubt that the Boeing 707 is a most impressive aircraft, it flies well and the crews in both directions were thoroughly happy with it. It cruises comfortably at 570 m.p.h. and the Intercontinental version will have reserves of power even greater than those of the present version. From the passenger viewpoint we liked, although we had doubted whether we would, the provision of two small windows above each row of seats with the individual air supply and, in emergency, the automatically-released dropout oxygen equipment.



AT THE PUMP

AT THE PUMP that carries this sign your drivers will be able to fill-up with the finest quality Derv in Britain. And if they always carry a Shell and BP Derv Agency Card with them, they can get Derv on credit or for cash on Agency terms at over 1,900 sites in Great Britain.




This is the sign they should look for

BLACKPOOL CHOOSE

ALHAMBRINAL

Permanent Interior Decorative Panelling

EXCLUSIVELY



EVERY BLACKPOOL CORPORATION

BUS, TRAM AND TRAILER IS FITTED

THROUGHOUT WITH ALHAMBRINAL

ROOF PANELS, BODY PANELS, SIDE PANELS, SEAT BACKS

"ALHAMBRINAL," the permanent decorative interior panelling, is extensively used for the lining of ceilings, under-racks, body panels and seat backs in motor coaches, buses, trolley-buses, tramcars, railcars and railway carriages. "ALHAMBRINAL" is produced in a wide variety of designs and colours which are solid throughout. It is practically indestructible under ordinary conditions of wear. It is light in weight, non-inflammable, non-corrosive and a non-conductor of heat or cold. It is ready to fix and can be supplied on aluminium, hardwood or plywood backing, cut to sizes and ready to erect

Thomas Thomson Sons & Co. (Barrhead) Ltd.

FERENEZE WORKS BARRHEAD near GLASGOW.

PHONE: BARRHEAD 1038-9
GRAMS: "WATERPROOF" BARRHEAD

OFFICIAL NOTICES

MANCHESTER CORPORATION

TRANSPORT DEPARTMENT

WORKS SUPERINTENDENT

QUALIFIED Works Superintendent required by Manchester Corporation Transport Department to take charge, under the works manager of the department's central repair works. Salary £845/£1,025. Forms of application and details returnable by Saturday, November 15, 1958, obtainable from the General Manager, 55 Piccadilly, Manchester, 1.

BRADFORD CITY TRANSPORT

- (1) ASSISTANT ROLLING STOCK ENGINEER (Salary range £1,025—£1,175).
(2) WORKS SUPERINTENDENT (Salary range £845—£1,025).

THE qualifications for these positions are: Institution of Mechanical or Electrical Engineers (Section B or Parts II and III), or Higher National Certificate in Engineering, with the necessary experience. Associate Membership of the Institute of Transport.

Application forms and further particulars from the General Manager, 11 Forster Square, Bradford, 1.

W. H. LEATHAM,
Town Clerk.

CLASSIFIED ADVERTISEMENTS

CLASSIFIED ADVERTISEMENTS should be addressed to THE MANAGER, Classified Advertisements, MODERN TRANSPORT, Russell Court, 3-16 Woburn Place, London, W.C.1.

RATES.—The minimum charge for classified advertisements is 7s. for 14 words or less, and 6d. for each additional word. The name and address of the advertiser is charged at the same rate. If a box number is used 2s. extra is charged to cover our name and address and postage. If set in paragraph form each paragraph is estimated separately. Official Notices and semi-display in the classified columns are charged at the rate of 40s. per single column inch.

ACCEPTANCE.—Advertisements can be accepted up to 2.30 p.m. on Monday to ensure insertion in the current week's issue. MODERN TRANSPORT is on Sale every Friday.

SITUATIONS VACANT

TRANSPORT. Man, 20-25, for Transport Office of large concern on Great West Road, Brentford. Some experience driver supervision, completion usual forms and returns; knowledge London area; salary 50/60 per week; pension scheme, canteen. Write Box 3798, MODERN TRANSPORT, 3-16 Woburn Place, London, W.C.1.

SALES ENGINEER with good experience of motor transport industry required for tank sales. Apply with full details of qualifications, experience and salary to Box No. 3802, MODERN TRANSPORT, 3-16 Woburn Place, London, W.C.1.

PUBLICATION

NINETEENTH CENTURY RAILWAY CARRIAGES by C. Hamilton Ellis. Profusely illustrated—obtainable from the publishers—MODERN TRANSPORT Publishing Co., Limited, 3-16 Woburn Place, London, W.C.1. Price 22s. including postage.

LETTERS TO THE EDITOR

Canals and Traffics

The Editor is always glad to receive letters from readers on subjects germane to the transport industry, but these should be written as concisely as possible. The opinions expressed therein must not, however, be regarded as having editorial endorsement. Where correspondents desire to use a nom-de-plume it is essential that the Editor should be informed of the name and full address of the writer as indication of good faith.

Canals and Traffics

SIR.—The leading article which appeared in your October 4 issue under the above title appears to require some informed comment, particularly as it purported to answer in some degree the excerpts of an article which *The Times* published in its issue of September 24.

The greatest portion of your article consisted of a recapitulation of previously published figures dealing with the uneconomic operation of nationalised waterways by the B.T.C. and no useful purpose can be served by further examination of them. What is somewhat surprising is the general tone of antagonism which permeates your article over the likelihood that proposals should have been put forward which would, if put into effect, make possible substantial economies in one of this country's transport media.

It has not proved possible to trace any outcry from your journal in the past expressing concern for the ratepayers in having to foot the vast (and justifiable) expenditure on road and rail developments, despite their not very impressive financial history. Now that a sum of £3½ million is proposed to be spent in bringing up to standard some hundreds of miles of canals (equal to 10 miles of new motorway) your anxiety is most marked, bringing to mind something about "straining at gnats and swallowing whales."

Regarding your comment that loadings of canal craft with bulk and/or basic traffics is more likely on the Class A canals and waterways, this is manifestly wrong; over 95 per cent of such loading is effected on class B waterways. As for an increase in water-carried traffics not relieving the loads on the roads, your reasoning is hard to follow.

Three questions for your readers to consider and answer are:

- Why did the Minister of Transport and Civil Aviation consider it necessary to appoint the Bowes Committee, consisting of senior and experienced business executives, to investigate the potential and future use of waterways almost immediately after the Board of Survey appointed by the B.T.C. had made their negative and non-constructive report.
- Would industry, or any part thereof, benefit from a reduction of 20 per cent in their traffic rates if routed by water.
- With such a reduction offering by water on class B canals could an increase of three times the present volume of traffics be expected.

For the transport industry of this country to offer the greatest efficiency and economy it is necessary to use all and every means on a global basis.—Yours faithfully,

LESLIE N. MORTON.

Willow Wren Carrying Company,
Brentford, Middlesex.

[The article did not in fact contain "a recapitulation of previously published figures dealing with the uneconomic operation of nationalised waterways by the B.T.C." Its purpose was to

demonstrate, from the calculations of the Bowes Committee, the result of carrying out that Committee's recommendations regarding the Class B waterways. In the Committee's view these would raise the deficit on these waterways to roughly £500,000, with additional expenditure of not less than £½ million on reinstatement which, for the reasons stated, would have to be borne by the taxpayer. Such expenditure, of course, would be justified if prospects were favourable, but, as we stated, "the Committee points out that although the proposed measures may arrest, or in places reverse, the downward trend of traffic, it sees no prospects that receipts of class B waterways will suffice to meet charges properly chargeable to revenue." The reasoning as to the limited possibility of road relief was also culled from the report. We suspect that most of our readers should have little difficulty in answering Mr. Morton's three questions.—Editor, MODERN TRANSPORT.]

Highland Steamers

SIR.—Your correspondent, Mr. L. H. Bailey, writing regarding the steamers of David MacBrayne, Limited, in your issue of September 27, may be glad to know that the *Lochinvar* was not at Oban this year; in fact she was laid up during the summer. The Lismore service is normally carried out by the *Lochnell*.

It is obvious that MacBrayne's is faced with the modern age problem—the motor car, which has easy access to Isle of Skye via the Kyle of Lochalsh—Kyleakin ferry, hence the proposal to withdraw the *Lochnell* from the Portree run.—Yours faithfully,

ERIC J. CHARMAN.

181 Croydon Road,
Caterham,
Surrey.

Whitehaven Tunnel

SIR.—Although I suspect you are not responsible, may I point out one or two factual errors in your article on Whitehaven Tunnel in your issue of October 18? This tunnel was not built in 1845. It was authorised by the Whitehaven and Furness Junction Railway Act of August 3, 1846, but owing to the depressed state of the company's finances, work was not started until September, 1850; it was opened to traffic on September 30, 1852.

There was no question of not being able to get powers to make the line in open cutting. The company's consulting engineer, James Walker, had advised against this because of "the uncertainties of the strata." I assume it was for the same reason that George Stephenson preferred a tunnel at this point on his survey for the "Grand Caledonian Railway" in 1837.—Yours faithfully,

C. R. CLINKER.

9 Regent Place,
Rugby,
Warwickshire.

Sidings Sought for Old Stock

SIR.—The Railway Preservation Society has been formed to give the individual railway enthusiast a chance to play an active part in restoring and preserving historic relics. We are negotiating the purchase of a Manchester, Sheffield and Lincolnshire six-wheeled coach dating from about 1880. This coach is at present stored in a

private siding in the North of England and we would like to find a more convenient storage space.

We are, therefore, anxious to contact commercial firms in the London area which have surplus rail sidings which they would be willing to rent out to the R.P.S. Any firm interested is invited to write to the writer of this letter at the address below.—Yours faithfully,

D. NOEL DRAYCOTT,

Chairman,
Railway Preservation Society.

15 Castelnau Gardens,
London, S.W.13.

Consultative Committees

SIR.—Contrary to the opinion expressed in your October 18 issue, many people are still unaware of the existence of Transport Users' Consultative Committees. British Railways recently posted notices outside Pleck Station (Walsall) to announce its proposed closure, yet as no mention was made of the address of the area T.U.C.C. nor of its intention to consider the proposed closure, I believe only two people were able to make any representation and moreover none was aware of the constitution of the committee.

If, as stated, the T.U.C.C. "cannot... formulate views on general transport policy" then it would seem that they have no alternative but to recommend a station's closure if evidence of poor rail user can be presented, in spite of the lack of any effort by the railways to attract passenger traffic.

Although this station is obviously uneconomic it would be hard to find one in this area that could cover a fraction of its costs by passenger receipts alone in spite of the density of population.

It is ridiculous to expect people to use the train services when they are so infrequent as to resemble the services on a rural branch line, and a comprehensive report of the Birmingham Junior Chamber of Commerce recently recommended the introduction of regular headway services as the only solution to the decline in rail user.

Pleck is situated between Walsall and Wolverhampton and on this and many other routes rail fares are below comparable road fares and the journey time is less, yet here there are only nine or ten trains each day.

There is obviously no way for the public to secure proper rail facilities in the area and the decline in rail user must inevitably continue.—Yours faithfully,

A. SADDLER.

Walsall, Staffs.

Further moves in the reorganisation programme of Hawker Siddeley Group announced recently by Sir Roy Dobson rationalise the production of medium and small diesel and petrol engines. The production of all medium and small diesel and petrol engines, including some of the engines previously produced by J. and H. McLaren, Limited, and the small Armstrong Siddeley engines will be concentrated at the Staines factory of Petters, Limited. Further expansion of fuel-injection equipment production by Bryce Berger, Limited, which has been restricted by the company's present factory space adjacent to Petters at Staines, will be made possible by moving that company to the group's Gloucester Aircraft factory at Hucclecote. All the movements are being carried out in such a way that there will be no interruption in supplies to customers or interference with service.

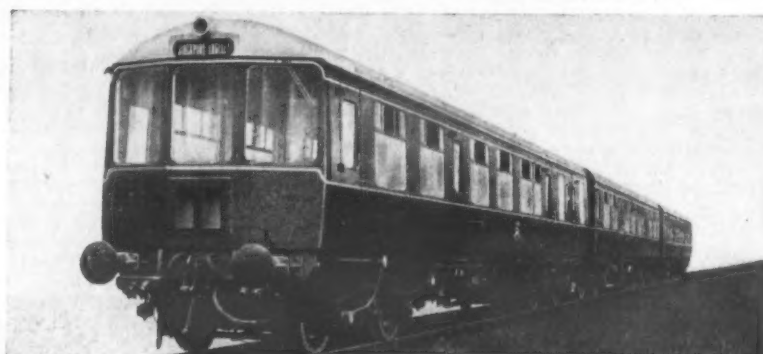
COMMONWEALTH
RAILWAYS
OF AUSTRALIA

955 H.P. Diesel-
Electric Locomotive
(10 Ton Axle Load)

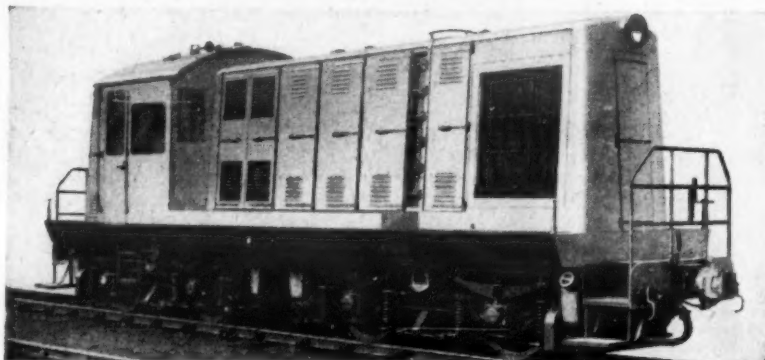
In collaboration with
Sulzer Bros. (London) Ltd
and
Crompton Parkinson Ltd.

BRITISH
RAILWAYS

Three Unit
Diesel Mechanical
Railcars

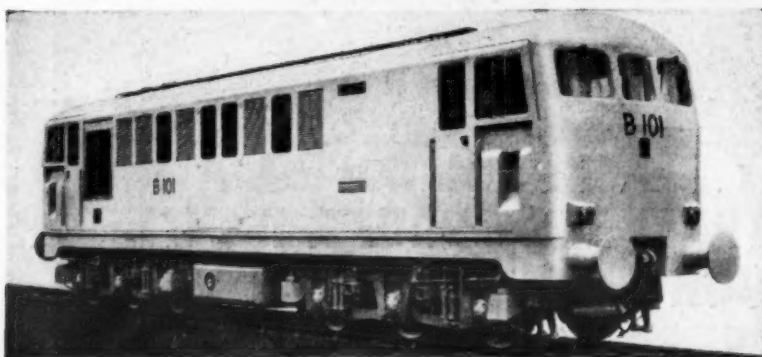
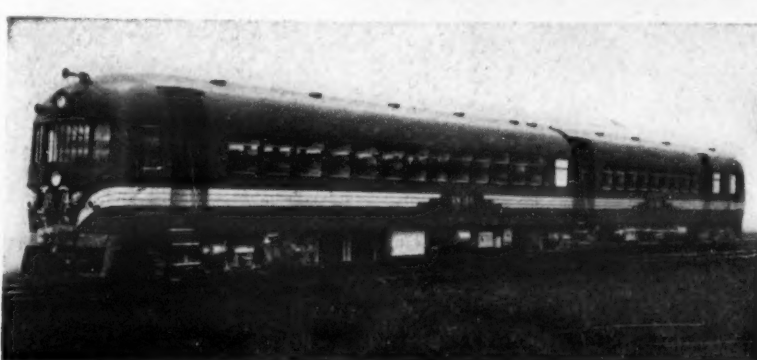
GHANA
RAILWAYS

400 h.p. Diesel
Electric
Locomotive

NEW
ZEALAND
GOVERNMENT
RAILWAYS

Twin Articulated
Diesel Mechanical
Railcars

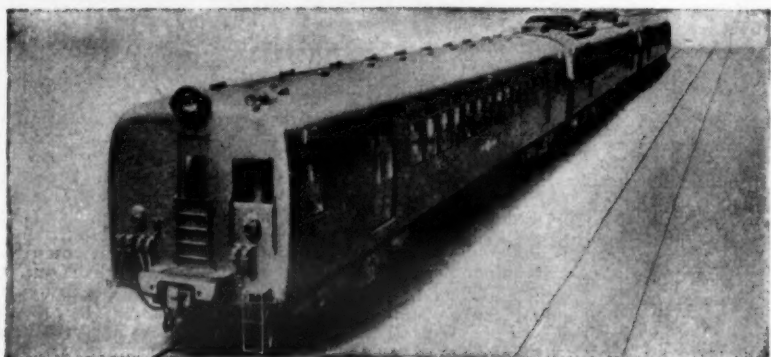
In collaboration with
The Drewry Car Co. Ltd.

CORAS
IOMPAIR
EIREANN
RAILWAYS

960 h.p. Diesel
Electric Locomotive

SANTOS
JUNDIAI
RAILWAY,
BRAZIL

3,000 Volts, 800 H.P.
Three Car Train
In collaboration with
The English Electric
Co. Ltd.



TELEPHONE
SMETHWICK 1881

Smethwick

TELEGRAMS
'CARRIAGE SMETHWICK

DIESEL TRACTION

In the North Eastern Region

By F. L. HICK, Assistant Operating Officer, North Eastern Region, British Railways*

WE have had diesel schemes operating in the North Eastern Region since 1955 and there is a keen curiosity amongst railway staff—a very healthy sign—as to the success or otherwise of diesel multiple-unit schemes. An uplift in morale is noticeable wherever diesels have been introduced, and a more brisk and businesslike attitude to train services, both on the platform and on the line, is apparent. The public have responded to this first tangible result of the modernisation plan quickly and permanently, and the impact of this new mode of travel is unmistakable. It is because it is new in every sense. It is clean, attractive, with a strong psychological appeal—a complete break from traditional railway practice. It requires this sort of thing to bring

should be a sound assessment made and full and imaginative consideration given to all possibilities of improving net revenue.

Using Good Potential

Where there is a good potential (if we are to survive at all) we must go all out to retain a service by seeking vigorously, urgently and indefatigably ways and means of doing the job without losing efficiency at less cost. Having decided potential exists we must provide and maintain a service at regular intervals to suit the traffic, bearing in mind that we are bound to experience peak loadings and light loadings, not only daily and weekly, but also seasonally. We should meet this position by planned cuts in train formations

RECEIPTS (INTERNAL BRANCH BOOKINGS ONLY)

| Service | Date of Introduction | 12 m.e. May 1954 | £ | £ | % | Increase on 12 m.e. May 1954 | % |
|---|----------------------|------------------|---------|----------|-----|------------------------------|-----|
| Bradford Ex.—Leeds Cen.—Harrogate—Knaresborough | 14 June, 1954 | 12 m.e. May 1954 | 23,173 | 23,173 | | | |
| | | 1955 | 32,157 | + 8,984 | 38 | | |
| | | 1956 | 50,343 | + 18,186 | | + 27,170 | 117 |
| | | 1957 | 99,026 | + 48,683 | | + 75,853 | 327 |
| | | 1958 | 115,061 | + 16,035 | | + 92,788 | 400 |
| Bradford Ex.—Wakefield West Gate | 25 Feb., 1957 | Jan. 1957 | 3,109 | | | | |
| Leeds Cen.—Castleford Cen. | 25 Feb., 1957 | Jan. 1957 | 12,074 | + 8,965 | 288 | | |
| Newcastle—Middlesbrough | 21 Nov., 1955 | Oct. 1955 | 5,711 | | | | |
| | | 1956 | 14,406 | + 8,695 | 152 | | |
| | | 1957 | 207,310 | + 53,068 | 26 | | |
| | | 1958 | 280,378 | + 51,934 | | 105,002 | 51 |
| Newcastle—Carlisle | 4 Feb., 1957 | Jan. 1957 | 312,312 | | | | |
| | | 1958 | 116,408 | | | | |
| | | 1959 | 151,031 | + 35,223 | 30 | | |
| Hull—Hornsea | 7 Jan., 1957 | Dec. 1956 | 22,125 | | | | |
| | | 1957 | 34,521 | + 12,396 | 56 | | |
| Hull—Withernsea | 7 Jan., 1957 | 1956 | 21,840 | | | | |
| | | 1957 | 39,173 | + 17,333 | 79 | | |
| Darlington—Saltburn | 19 Aug., 1957 | July 1957 | 123,599 | | | | |
| | | 1958 | 101,376 | + 37,786 | 36 | | |
| Darlington—Richmond | 19 Aug., 1957 | 1957 | 5,183 | | | | |
| | | 1958 | 5,335 | + 152 | 3 | | |
| Darlington—Crook | 16 Sept., 1957 | 1957 | 12,606 | | | | |
| | | 1958 | 13,164 | + 558 | 5 | | |

back business. We require a similar stimulant on the freight side, be it in the form of "piggy back" or what you will. Something that captures the imagination, attacks and coerces and is inherently good and businesslike.

The cost of the units for the schemes is approximately £7½ million and the new works cost approximately £1½ million. The facts are tabulated and speak for themselves. It is also borne out in statistics that on most lines where diesel multiple units are operating the receipts for this year so far show an increase despite the exceptionally bad weather. Special mention might be made of the Leeds City—Barnsley service which on local

ESTIMATED ANNUAL OPERATING ECONOMIES

| Scheme | £ |
|---|-------------|
| West Riding District (including Ilkley) | 124,262 |
| Newcastle—Middlesbrough | 18,744 |
| Newcastle—Carlisle | 71,900 |
| Combined Northern | 184,170 (a) |
| Hull District | 176,856 |
| Darlington District | 140,483 |
| York District | 195,402 |
| Total | 891,817 |

(a) Includes extension of Newcastle—Middlesbrough service.

bookings has in the first five months of its operation brought in £14,905 additional revenue compared with the corresponding period last year. What I have not been able to show you is the profitability or otherwise of the lines over which the diesels work. That is a major operation!

Punctuality

Better timings are available on all routes and punctuality has improved considerably. Some recent figures are given in a table. Either end drive, facilitating quick turnaround and reducing station movements and platform occupation, easy manipulation during emergency workings,

DIESEL PASSENGER TRAIN PUNCTUALITY, FOUR WEEKS TO OCTOBER 4, 1958.

| Local Services | No. of Trains | % of trains arriving at: | | |
|--|---------------|--------------------------|----------------|-------------------|
| | | Time | 1-10 min. late | Over 10 min. late |
| Newcastle District | 3,155 | 92.30 | 6.53 | 1.17 |
| Newcastle, Sunderland and Middlesbrough | 800 | 82.12 | 16.25 | 1.63 |
| Newcastle and Carlisle | | | | |
| Expresses | 471 | 88.53 | 10.41 | 1.06 |
| Sunderland District | 1,454 | 96.69 | 2.67 | .64 |
| Darlington District | 5,176 | 92.02 | 6.89 | 1.09 |
| York District | 624 | 75.32 | 22.27 | 2.41 |
| Hull District | 3,280 | 85.34 | 13.05 | 1.61 |
| Wakefield District | 1,781 | 84.17 | 14.76 | 1.07 |
| Bradford, Leeds Cen., Harrogate, Knaresborough | 3,211 | 85.25 | 13.20 | 1.46 |
| Leeds City District | 94 | 81.91 | 17.03 | 1.06 |
| N.E.R. to Eastern Region via Hornby Junction | 460 | 73.04 | 21.09 | 5.87 |

including single-line working, diversions and reversing movements generally have all contributed to improved operation. Advantages on the motive power side are also substantial in the depot and outside—to name the more comfortable conditions in the cab as one. Fire cleaning, coaling, watering—some of the dirtiest and most unpleasant railway work—are completely eliminated.

Amongst the various schemes which in their justification showed annual operating savings and have in operation attracted additional revenue, there must nevertheless inevitably be sections of line which are somewhat "shaky." Some of the lines were never expected to show first-class results and diesels were introduced to test the resilience of the area to a new and more economical form of traction. They did in any case provide a more economical means of working, and it remains to be seen whether they can justify their existence. There should be no misunderstanding on anybody's part about diesel schemes which cannot properly pay their way. They will have to be abandoned and with the modern trend of increased travel by private cars, motor-cycles, scooters, etc., the use of railways in certain areas is likely to disappear. Therefore there will undoubtedly be cases arising where even the more economical method of diesel rail operation will not save the branch lines from closure. Occasional failure in this experiment should not discourage us—in fact, there should be no hesitancy to realise weaknesses; but before drastic action is taken in the removal of a service there

so that running costs are kept to the minimum. The technique of diagramming men and coaches should at the same time be designed to work the maximum amount of traffic with the minimum of stock. We have been too liberal in the past in the provision for peak requirements.

As the diesel schemes develop and traffic grows, more vehicles will have to be drafted into the services just as it has been necessary to do on the Bradford—Leeds—Harrogate route. Conversely, on those diesel services which have been put on to test profitability and failed to meet movement costs the units will have to be withdrawn and balance up the additional demands on the profitable schemes. From severe delays in delivery in the early stages the makers have overcome arrears and are sending cars months ahead of schedule. The position in the North Eastern Region is that at the end of the year we shall have at least 618 railcars. By the end of next year practically the whole of the local services will be operated by diesel multiple units; the leading figure of 24.3 per cent of mileage operated by diesel is held by the N.E. Region in the four weeks ended October 10.

Future Schemes

The schemes still to be introduced are mainly in the West Riding and the York District. One covering Leeds—Bradford to Ilkley, Keighley and Skipton should bring considerable additional traffic. An interval service is being planned for the Leeds—York—Scarborough line and between Leeds and Hull. The services between York—Sheffield, York—Normanton and York—Doncaster are also being recast. A major revision of services will take place in the West Riding, when the value of bringing this area under one administration will be apparent.

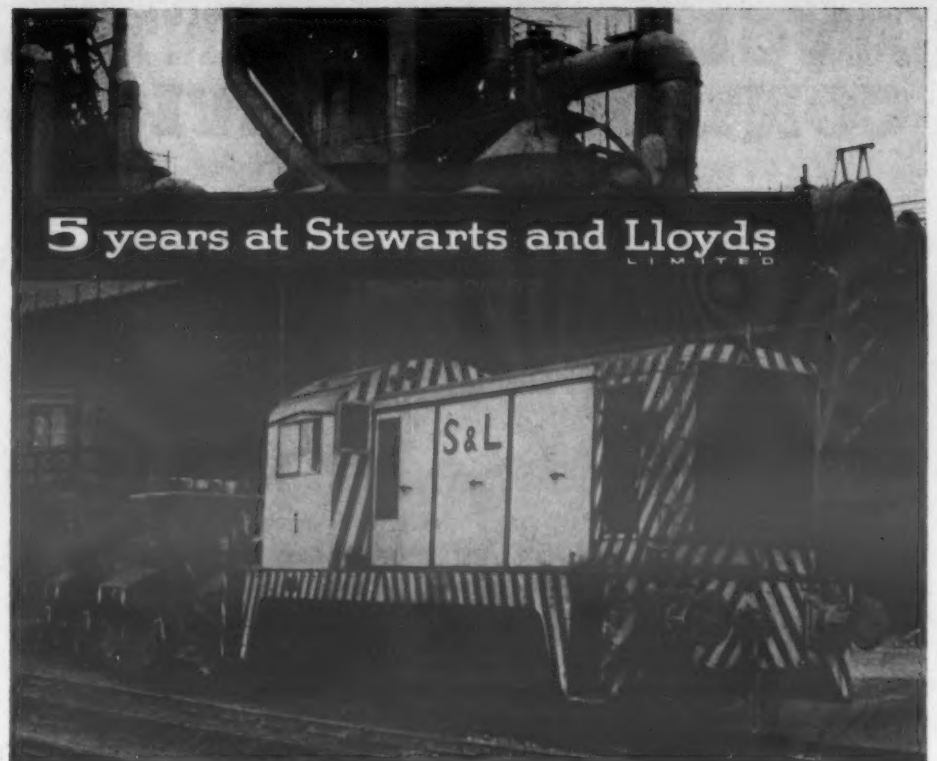
On the more important cross-country runs there are differing views about using multiple-unit stock as compared with diesel locomotive hauled trains. A scheme which comes into this category (the last diesel multiple-unit scheme which I think will fall to be developed by the North Eastern Region for the time being) is an intercity scheme for a service Hull—Liverpool via Leeds and Manchester, and you may be interested in the considerations which are being taken into account in the build-up of this scheme.

Hull to Liverpool

It is obviously desirable that there should be a good service between three of the most important ports in the country, while the travel potential as between Leeds and Manchester particularly is considerable. The first query which arose in this case was whether diesel multiple units should be provided or diesel locomotives with suitably designed carriages. It was important, however, that the service must make a real impact on the public. It must be something new, attractive and fast, at regular intervals. The seating must be comfortable, the interior design attractive and the facilities on the train appropriate for the journey.

The possibility of using diesel locomotives of, say, 2,000 h.p. was considered, but eventually it is probable that a multiple-unit train of six coaches, including a buffet car of new design with a horsepower of 1,840 will be the best answer to the problem, i.e. four motored cars with two 230-h.p. underfloor motors on each. This horsepower has been considered by some to be on the high side, but it is acknowledged that there should be sufficient power reserve, not only to meet all normal service requirements, but also to make due allowance for adverse conditions. Trains will leave Leeds for Manchester and Liverpool at 45 min. past the hour, trains from Hull at even times forming part of the interval service. The aim has been to try to achieve a journey time, including recovery time for temporary permanent way restrictions, of 60 min. between Manchester and Leeds with a 1-min. stop at Stalybridge, and a 2-min. stop at Huddersfield. This is what we require to compete with the private car.

Associated with the intercity scheme will be a complete revision of the surrounding feeder and other local services. There will be an hourly interval service from Leeds Central at 6 min. past the hour via the L. and Y. route to Manchester gathering the traffic from Bradford, Halifax and other important points on the route. Interval services will be run over the L.N.W. route serving intermediate points and will be designed to feed into and out of the express services. The departures via the L. and Y. route are staggered with those over the L.N.W. line.



5 years at Stewarts and Lloyds

PAXMAN

DIESELS

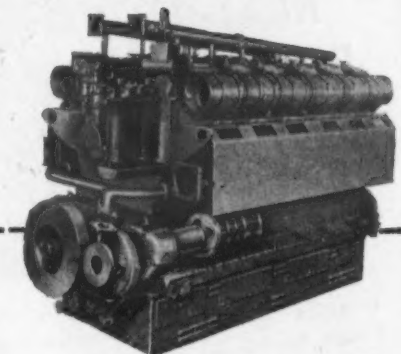
128-2300 b.h.p.

Sixty-five per cent of all steelworks diesel locomotives, from 38 to 52 tons, at work in Great Britain, are powered by Paxman diesels.

At Stewarts and Lloyds Limited alone, sixteen Paxman engines have each given an annual average of 2,400 hours sterling service over the past five years.

The total hours in service of these locomotives are as follows:

| | |
|--|---------|
| 6 locomotives at Bilston | 126,300 |
| 6 locomotives at Corby | 121,000 |
| 4 locomotives at Clydesdale Works, Mossend | 28,666 |



DAVEY, PAXMAN & CO. LTD.

Colchester, England

A member of the Ruston Group



Every engineer should have a copy of this free 42-page guide to high duty iron castings. It explains and illustrates the many applications of Meehanite Metal in every branch of engineering.

Write to one of these Meehanite Foundries for your copy

Winget Limited, Rochester. Ashmore, Benson Pease and Co., Stockton-on-Tees. The Butterley Company Limited, Ripley, Derby. Cameron and Robertson Limited, Kirkintilloch. Carmichael Bros. Limited, Nile Street, South Shields. Goulds Foundries Limited, Newport, Mon. John Harper (Meehanite) Limited, Willenhall, Staffs. G. M. Hay and Company, Ltd., Glasgow. C. A. Parsons and Company, Limited, Newcastle-on-Tyne 6. Qualcast (Ealing Park), Ltd., London, W.5. Richards Foundries Limited, Leicester. Southern Foundries Limited, Waddon, Croydon, Surrey.

Cast Iron Can Do it—if it's
MEEHANITE
The Dependable Metal



THE INTERNATIONAL
MEEHANITE METAL
COMPANY LIMITED

Meerion House
4 Downside, Epsom, Surrey
Telephone: Epsom 3507-9
Telegrams: Meerion Epsom

* Abstract of paper read before the Federation of Railway Lecture and Debating Societies, North Eastern Region, York.

ANGLO-CONTINENTAL CONTAINER SERVICES

(LONDON) Ltd. and (BELFAST) Ltd.



House flag flown by ships of A.C.C.S.

● DAILY SAILINGS

* * * *

● ENQUIRIES INVITED

ENGLAND, SCOTLAND & N. IRELAND

Ports of Shipment being: Preston (Lancs.), Larne (Co. Antrim) and Ardrossan (Ayrshire)

BELFAST: 35/9 Middlepath St. Belfast 59261/5

LARNE: (Co. Antrim) Bay Road. Larne 2331/3

PRESTON: (Lancs.) The Dock. Preston 86742/4

MANCHESTER (2): 270/1 Royal Exchange

Buildings. Blackfriars 9287/9

BRISTOL (1): 61 Park St. Bristol 25435/6

ARDROSSAN: (Ayrshire) Harbour Street,

Ardrossan-Saltcoats 1911/2

GLASGOW (C.2): 10 Bothwell St. City 6997/8

LONDON: (Depot) Elland Rd., S.E.15. New X 4885/7

LONDON: (Offices) 79 Dunton Rd., S.E.1.

Bermondsey 4881/4

PICKFORDS HEAVY HAULAGE SERVICE

Abnormal Loads • Lifting

MOBILE CRANES FOR HIRE • Branches in all large towns

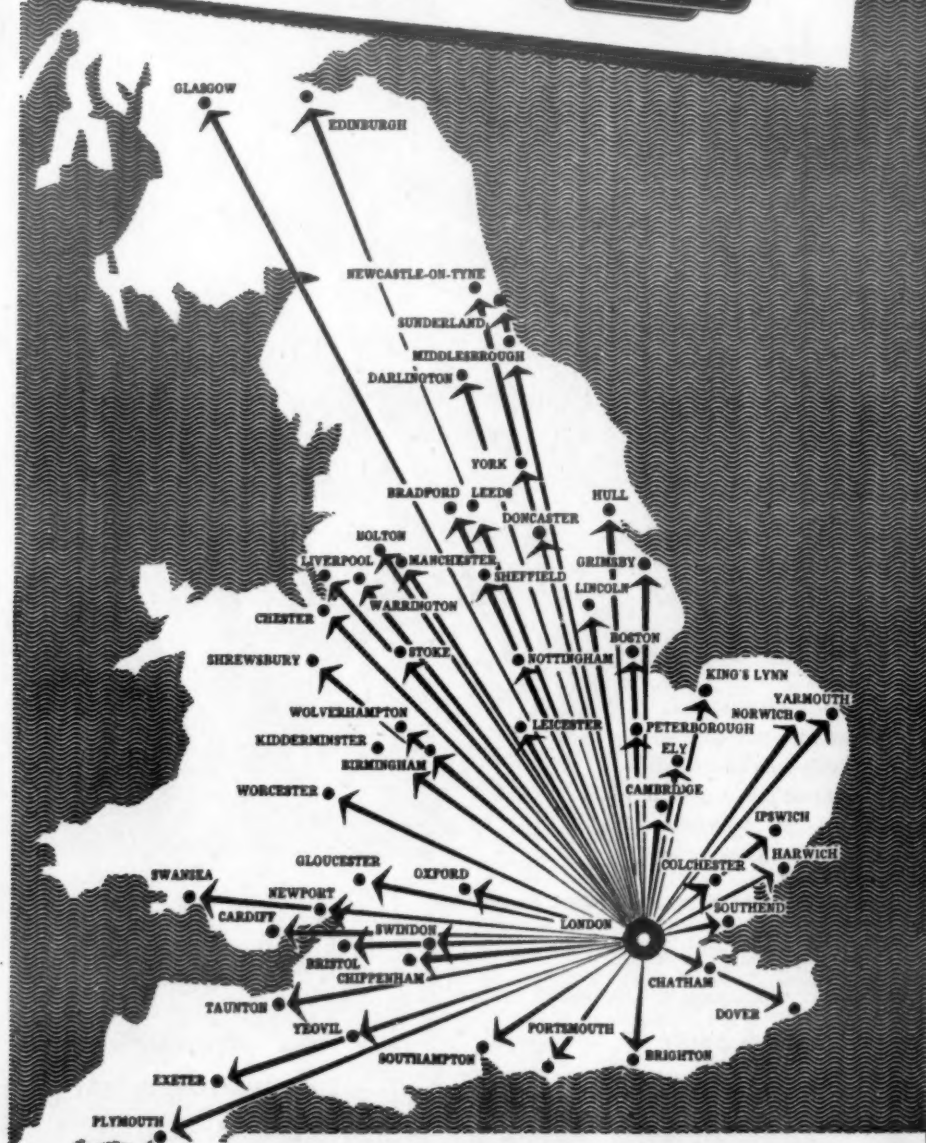
NEXT-DAY DELIVERY BY EXPRESS FREIGHT

This map shows some of the many towns to which British Railways Express Freight Services can give next-day delivery for wagon-load traffic. It is a time-table service—and door-to-door transport can be provided. Express Freight charges are competitive with any other



form of transport. For further information get in touch with your local Stationmaster or Goods Agent. He'll supply you with all the details you need.

BRITISH RAILWAYS



BRITISH RAILWAYS EXPRESS FREIGHT

Electric Traction Preparations

(Continued from page 5)

fault can permit sufficient 50-cycle current to pass to the track relay and operate it irregularly.

The interlocking and track circuit control functions for the four local ground frames and their protecting signals are concentrated in small relay interlockings. Each is complete and self-contained so far as safety signalling and interlocking circuits are concerned, but instead of being operated from a local panel they are controlled by switches or levers in the signalbox at the end of the section. To reduce the number of line wires for signalling control and indication circuits on this 9½-mile section, on which the controlling signalboxes are located at either end, and thereby avoid the heavy cost of multicore signalling cable which would otherwise be necessary, Westronic high-speed remote control equipment, requiring only one pair of wires between each local relay interlocking and the signalbox, is being used for the first time on British Railways.

Remote Control Equipment

The functions of this remote control equipment are two-fold:

- The transmission of control codes (initiated by the operation of a switch or lever) from the signalbox to the local relay interlocking to enable the signalman to operate the various signalling functions at remote stations.
- The transmission of indication codes from the local relay interlocking to the signalbox to keep the signalman fully informed, by means of signal and track circuit indications, of the changing conditions over the section he controls.

These Westronic control links also carry the emergency replacement control of automatic signals and indications for the automatic sections between the most conveniently situated relay interlocking and the parent signalbox. Control and indication messages are transmitted simultaneously between the signalbox and each local interlocking by means of carrier frequency impulses over one pair of wires. Two different frequencies are used for controls, the appropriate one being selected for transmission by the position of the control switch or lever concerned and two other frequencies for indications, the one selected for transmission being that corresponding to the condition at the local interlocking, e.g. "track circuit clear" or "track circuit occupied."

Transistorised Coding Units

By the use of fully transistorised coding units and carrier frequency transmitters and receivers, high coding speeds are employed and also the principle of continuous scanning. Approximately three complete scans are sent each second and the overall time from the operation of the panel switch in the signal box to the operation of the final relay at the remote interlocking is of the order of 0.6 sec.

The Styal branch crossover road at Wilmslow which, as a temporary measure, has been worked from a local ground frame, will be operated electro-pneumatically from Wilmslow signalbox and used for turning back trains terminating at Wilmslow. Initially a small air compressor unit will be used for this purpose but at a later stage the control of these points will be incorporated in a larger electro-pneumatic installation controlled from the new power signalbox at Wilmslow. Electric power for the signalling on the Styal line is obtained from the North Western Electricity Authority at Wilmslow and East Didsbury.

The second phase of the scheme embraces the line between Crewe and Cheadle Hulme and is well under

way. When completed, in April, 1959, the whole of this 22-mile section, at present operated by 12 mechanical signalboxes, will be brought under the control of two power boxes, at Wilmslow and Sandbach. The work has been planned and carried out under the direction of Mr. E. G. Brentnall, London Midland signal engineer, by his modernisation staff. The major part of the installation work has been carried out by his staff with assistance from several contractors.

Westinghouse Brake and Signal Co., Limited, has been responsible for the supply and installation of the Westronic remote control equipment and the track circuit equipment, also the supply of the colour light signals. The telecommunications cables have been designed, supplied and installed by British Insulated Callender's Cables. The multicore signalling cable was supplied by Crompton Parkinson, Limited, the plug-in signalling relays by Siemens and General Electric Railway Signal Co., Limited, the signal post telephones by Standard Telephones and Cables, Limited, and the dial selective telephones by the Automatic Telephone and Electric Co., Limited.

Locomotive Conversion

The gas-turbine locomotive, No. 18100, built by Metropolitan-Vickers Electrical Co., Limited, for the Western Region, has now fulfilled its experimental purposes and has been adapted by Metrovick to act as a unit for training staff and testing overhead line equipment. This conversion makes it possible to carry out tests and training in advance of the electric locomotives now being built for passenger services. The gas turbine and its associated auxiliaries have been removed and mounted in their place are a transformer and mercury arc rectifiers to supply power to four of the original traction motors; the other two traction motors have been removed, so that the Co-Co wheel arrangement has given place to Bt-B.

The roof of the locomotive has been modified to accommodate a single Faiveley pantograph and a Brown Boveri air blast circuit breaker; both cabs have been remodelled and re-equipped to conform as nearly as possible to the design of the new a.c. locomotives, although the future cabs will have more space.

The main transformer has three windings. The primary winding is so arranged that it can be connected to a 25,000-volt or 6,250-volt supply according to the voltage of the overhead line. The secondary supplies three Hewitt glass bulb multi-anode rectifiers for the traction load. The tertiary provides an 800-volt supply for electric train heating. These rectifiers are not typical of those to be used on future a.c. locomotives. Tap changing on the transformer enables the rectifier to give a d.c. voltage to the traction motors, and, therefore, controls the working speed and load of the locomotive. The original Chloride 110-volt, 360 ampere-hour lead-acid battery has been retained to supply certain of the auxiliaries. The 105-ton locomotive is fitted with air brakes which can be operated either by the air brake handle or, when a fitted train is being worked, by the vacuum brake handle through a vacuum-air proportional valve. The bulk of the training of staff will be done on the Styal line, first with light engine and then with loose-coupled and fitted trains between Mauldeth Road and Styal and later between East Didsbury and Sandbach.

SMALL INTERNATIONAL VAN

B.M.C. Running Units

ENGINE and gearbox of British Motor Corporation manufacture are fitted to a new delivery van recently introduced by International Harvester Export Company, Chicago. Designated AM 80 Metro-Mite, the new van has a wheelbase of 8 ft., forward control and sliding doors to the driving compartment. It has a Metro integral steel chassis-body similar to the larger International-Metro vans and with overall length of



New Metro-bodied International small van powered by B.M.C. petrol engine

13 ft. 3 in. is the smallest delivery vehicle produced by an American manufacturer.

The A55 four-cylinder petrol engine produces 51 b.h.p. and 81 lb./ft. torque at 2,200 r.p.m. A selling point in American vehicle markets is the claim that it will idle at 500 r.p.m. for about 8 hr. on one gallon (U.S.) of petrol. Drive is through a hydraulically operated 8-in. clutch and B.M.C. four-speed synchromesh gearbox. The van provides 200 cu. ft. of body space for a 1,000-lb. payload and has an unladen weight of 2,800 lb.

SOUTH LANCASHIRE TROLLEYBUSES

(Continued from page 3)

Walkden—Moses Gate—Bolton service. The company thereafter worked Swinton—Walkden—Little Hulton—Farnworth as a through service.

The South Lancashire Transport Act of May 10, 1929, authorised the whole of the company's tramway system to be converted to trolleybus operation except the section in the Borough of Leigh from Twist Lane to the Lowton boundary. The Farnworth, Kearsley and Barton leased sections were also authorised to be converted, and two short new trolleybus sections were sanctioned. These were from Lowton farther along the main road as far as Lane Head, which, being isolated from the remainder by the disallowed Leigh section, appeared rather pointless; and from Clifton tram terminus to the corner of Station Road, Swinton. The Act changed the company's name from the South Lancashire Tramways Company to the South Lancashire Transport Company, and, among other things, it stipulated that the trolley vehicles must have pneumatic tyres.

Trolleybuses Introduced

Trolleybuses did in due course, during the next four years, take over the whole of the S.L.T. tramway system except Leigh to Lowton, which was replaced by motor buses. The Act authorised the company to work motor buses within a radius of 15 miles from Leigh Town Hall, but not in Cheshire, Stretford or Trafford Park. This, of course, was additional to the motor buses already being worked on many routes by the parent Lancashire United Company. Trolleybuses never ran, however, on the Kearsley or Barton sections, and on only one of the Farnworth routes.

The first conversion was from Atherton as far as Ashton-in-Makerfield, via Hindley, where trolleybuses took over on July 29, 1930. The service was extended to the boundary at Haydock on June 21, 1931, on which date the through service into St. Helens, interrupted for a year, was resumed. St. Helens Corporation having meanwhile converted its own part of the route.

(To be continued)

SILVER ROADWAYS LTD.

Reliable Trunk Services to all Parts

EXETER
Peamore Garages, Alington
KENFORD 485

BIRMINGHAM
323 High St., West Bromwich,
Staffs.
WEST BROMWICH 2801

LLANELLY
Morris Works, Llanelly
LLANELLY 4302

CARDIFF
10 Dumfries Place
CARDIFF 21631

SWANSEA
Exchange Buildings
SWANSEA 241716

BRISTOL
70 Prince Street
BRISTOL 23318

LONDON 22-24 Bermondsey Wall West, S.E.16 BERMONDSEY 4533

GLASGOW
12 Dixon Street, C.2
CITY 3381

LIVERPOOL
11 Old Hall Street, Liverpool, 3
CENTRAL 6386

NOTTINGHAM
Pavilion Building, Pavilion Road
West Bridgford
NOTTINGHAM 93481

SOCIAL AND PERSONAL

Western Region Appointments

FURTHER development of the Western Region policy of decentralisation of management is signalled in the following appointments, announced late last week: Mr. L. Edwards, Mr. G. A. V. Phillips and Mr. R. C. Hilton are to be divisional traffic managers at Bristol, London and Birmingham respectively. Mr. W. R. Stevens has already been announced as divisional traffic manager, Cardiff. Under the revised organisation, the region is divided into four divisions, in each of which a divisional traffic manager will co-ordinate and control all commercial and operating functions, with responsibility to the assistant general manager (traffic), Mr. A. C. B. Pickford. Other appointments are announced:

Mr. J. H. F. Page, to be district traffic superintendent, Cardiff.
Mr. J. F. M. Taylor, to be district traffic superintendent, Swansea.
Mr. W. J. Morris, to be district traffic superintendent, Newport.

We regret to record the death of Mr. W. R. Strachan, formerly sales manager, Strachans (Successors), Limited. He was 61.

Mr. T. R. V. Bolland, who has been appointed traffic superintendent in the new South Eastern Division line traffic manager's organisation, Southern Region, B.R., joined the Southern Railway as a cadet in 1946. After three years' training in all departments, he gained experience in the three London traffic districts between 1949 and 1952. In that year he was appointed assistant to the district traffic superintendent, Redhill, becoming assistant district traffic superintendent, Woking, in 1954. He was appointed assistant to the chief operating superintendent in 1957, the position he now vacates to take up his new duties.

Major-General H. M. Liardet, C.B.E., O.B.E., D.S.O., Director-General of Vehicle Production, Ministry of Supply, recently visited the Finchley works of Simms Motor Units, Limited. His visit coincided with the production by Simms of the 4,500,000th fuel injector, examples of which are in use in many parts of the world.

We record with regret the death of Mr. W. H. Wybrew, who retired two years ago from the post of road transport manager of David MacBrayne, Limited. He joined the company in that capacity after the outbreak of the 1939-45 war. He was previously with the Maudslay Motor Co., Limited, and the Liverpool Cartage Co., Limited (like MacBrayne an associate of Coast Lines, Limited) as superintendent engineer.

A new essay competition, intended to encourage the study of diesel engines and their maintenance, has been announced by the Institute of the Motor Industry. The competition will be open to registered technical college students and two awards consisting of a first prize of 15 guineas and a second prize of 10 guineas are being given by Leslie Hart-ridge, Limited. The subject for the 1959 awards will be "The Servicing of Diesel Fuel Pumps and Injectors."

Mr. J. Rodgers, A.M.I.Mech.E., A.M.I.Loco.E., who has been appointed district motive power superintendent, South Eastern Division, Southern Region, B.R., received his general education at Glasgow and Brighton.

He commenced his railway career as an engineering apprentice in 1920 at the L.B.S.C.R. works at Brighton. In 1928 he was appointed a technical assistant. Transferred to the locomotive running department, he was subsequently locomotive foreman at Yeovil, Tonbridge and Guildford, and running shed superintendent, Exmouth Junction. In 1947 he was made assistant

(mechanical) to the motive power superintendent at Waterloo and in 1950 district motive power superintendent for the Brighton district.

The London Midland Region announces the following appointments:

Mr. F. Walton, to be district operating superintendent, Liverpool Central.
Mr. C. E. Jolliffe, to be regional pensions officer, Euston.
Mr. F. Craven, to be district road motor engineer, Manchester.
Mr. E. Danby, to be district estate surveyor, West Midlands district, Crewe.

Mr. F. E. Campion, chief civil engineer of the Southern Region of British Railways, is retiring on November 30 next and Mr. F. E. Cantrell, at present assistant civil engineer, will become chief civil engineer. Mr. J. Parker, now district engineer, Brighton, will become assistant civil engineer.

We record with regret the death of Mr. E. Russell Gurney, a former deputy chairman of the Yorkshire area Traffic Commissioners, and Recorder of Rotherham and Pontefract. He was 80. Mr. Gurney established the point that vehicle drivers convicted of not having third-party insurance may be disqualified from driving the same class of vehicle only and not generally.

The Passenger Vehicle Operators Association Scottish area dinner-dance is to be held in the Central Station Hotel, Glasgow, on January 20, 1959. It is hoped that even more English members and trade friends will be journeying north to attend this function, the second of its kind. Mr. W. Dodds, area chairman, has in fact undertaken to arrange accommodation at the Marine or other hotels in his home town of Troon and to arrange a programme of entertainment starting with a dinner-dance at the Marine Hotel on the previous Saturday and terminating with the area dinner-dance on Tuesday, January 20, so that a pleasant long weekend could be had. Inquiries should be made to him at 72 Portland Street, Troon, Ayrshire.

We regret to record the death, at the age of 58, of Mr. T. Watson, former director of Watson Brothers (Burton-on-Trent), Limited, C.E.M. Transport (1939), Limited, and associated haulage companies, which were nationalised in May, 1949.

Mr. P. Burgess, hitherto works director, takes over the duties of director and sales manager of Atkinson Vehicles, Limited, co-operating with Mr. A. R. Young in his duties as sales liaison officer. Mr. R. L. Bannister, B.Sc., A.M.I.Mech.E., has been appointed works manager. Mr. Bannister has been works director at Henry Meadows, Limited, since 1956.

On October 15 the Midland section of the Institute of Transport held a social evening for members and their wives and friends at the Council House, Birmingham, by kind permission of the Lord Mayor. Films were shown and after refreshments there was dancing until 10.30 p.m. A total of 87 attended and it is hoped that the innovation may be repeated in the future.

We regret to record the death of Mr. E. F. Sommer, M.Inst.T., founder and chairman of World Transport Agency, Limited, shipping and forwarding agents. Mr. Sommer, who was 78, began his career in a shipping and banking house in Basel and later entered the offices of one of the largest transport and travel agencies in London. Having gained experience in the principal European countries, he was called back to fill an important post in the company's headquarters, and in 1913 founded the World Transport Agency, a firm of international shipping and forwarding agents. It has a subsidiary company in Covent Garden to deal with fruit and vegetable traffic, and in 1949 World Air Express, Limited, was formed to deal with air cargo. Mr. Sommer was a fellow of the Institute of Shipping and Forwarding Agents. He was a member of the Economic Council of the Swiss Legation and councillor of the Italian Chamber of Commerce.

Colonel John Pye, of Oakhill Manor, Somerset, has been installed as Senior Warden of the Worshipful Company of Carmen. At another ceremony Colonel Pye received the parchment of membership of the Guild of Freemen of the City of London.

Captain J. C. Kelly-Rogers, who has devoted himself primarily to technical administration of the Irish air companies, has been transferred to fuller general management duties and technical administration will be the responsibility of Captain W. J. Scott, the operations manager, who now becomes assistant general manager (technical). Mr. James Gorman, the secretary of the companies, is advanced to assistant general manager, but will also continue as secretary. Mr. P. J. Brennan, up to now commercial manager, has been promoted to assistant general manager (commercial), while Mr. M. J. Dargan, previously staff and services manager, becomes assistant general manager (administration).

Mr. T. E. Jackson, M.Inst.T., appointed freight commercial officer, South Eastern Division, Southern Region, B.R., joined the Midland Railway in 1915.

He was relief goods agent in London and goods agent at Rochdale and Oldham Road, Manchester, before becoming operating assistant to the district goods manager, Manchester, and assistant district goods manager at Bolton and later at Manchester (1947). He became assistant (claims) to the chief commercial manager, London Midland Region, in the following year. In 1952 Mr. Jackson was appointed district goods superintendent, London Bridge, Southern Region, which post was redesignated district goods manager in 1955.

We regret to record the death at the age of 71 of Mr. M. J. Somerfield, formerly general manager and engineer, Walsall Corporation Transport Department. He served with the department for 43 years and was general manager for 20 years until his retirement in 1952.

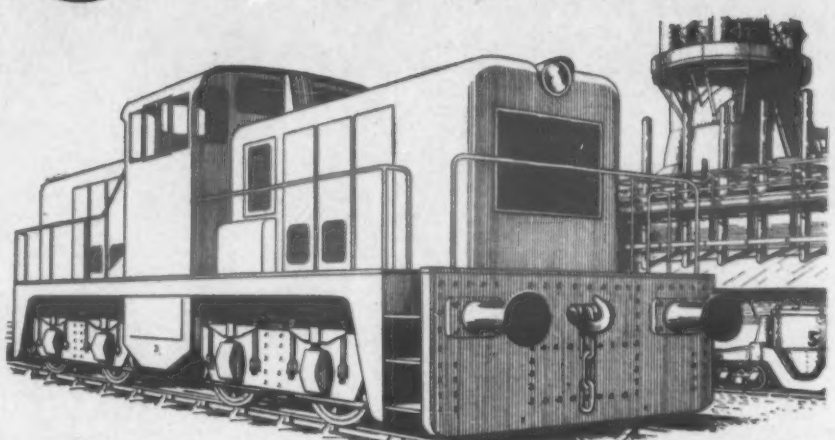
A plaque to James Brindley, the famous builder of canals, is to be unveiled in his native village of Wormhill, near Buxton, Derbyshire, where he was born in 1716. The unveiling is being performed on November 1 by Mr. Jack Longland, director of education for Derbyshire and noted broadcaster, on behalf of the Derbyshire Archaeological and Natural History Society.

British Transport Docks announce that Mr. J. A. Ross, docks mechanical and electrical engineer, Middlesbrough and Hartlepool Docks, retired on October 6. As a result of reorganisation, Mr. P. K. Brown, docks engineer, Middlesbrough and Hartlepool Docks, assumed responsibility for the whole of the civil, mechanical and electrical engineering organisation at these ports as from October 1.

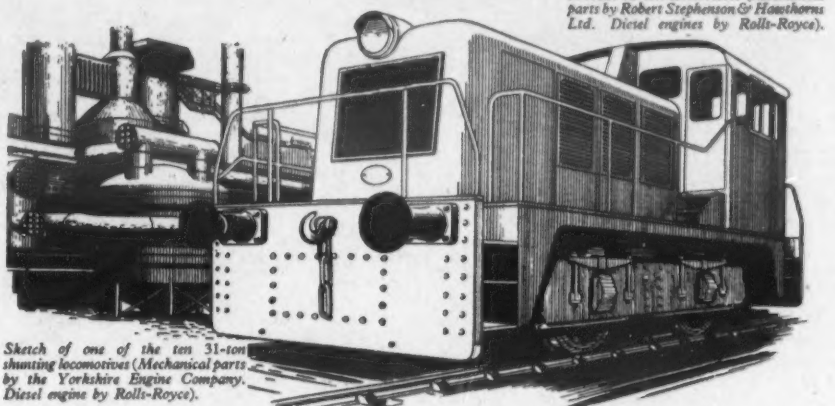
Consequent upon the retirement on December 31, as already announced, of Mr. F. P. Arnold, member of the Tilling group management board, a number of new appointments is being made within the group. The following are new chairmanships: United Automobile Services (and associates), Mr. J. S. Gavin. West Yorkshire Road Car (and associates), Mr. C. H. S. Pickett. Crosville Motor Services, Mr. M. A. Holmes. Brighton, Hove and District, Mr. J. S. Gavin. New directors: United Automobile Services (and associates), Mr. R. I. H. Longman. Lincolnshire Road Car, Mr. J. S. Gavin. London Coastal Coaches, Mr. R. I. H. Longman. Mr. Pickett will also become a member of the Halifax and Huddersfield Joint Omnibus Committees.



DIESEL-ELECTRIC LOCOMOTIVES FOR INDIA'S STEEL INDUSTRY



An artist's impression of one of the thirteen 72-ton locomotives (Mechanical parts by Robert Stephenson & Hawthorn Ltd. Diesel engines by Rolls-Royce).



Sketch of one of the ten 31-ton shunting locomotives (Mechanical parts by the Yorkshire Engine Company. Diesel engine by Rolls-Royce).

British Thomson-Houston, as a constituent Company of the Indian Steelworks Construction Company (ISCON), has in hand orders for a total of 23 diesel-electric locomotives for use in the Government of

India's Durgapur Steelworks. The electrical equipment of the thirteen 72-ton Bo-Bo units and ten 31-ton 0-4-0 units will be of BTH design and construction throughout.

BRITISH THOMSON-HOUSTON

THE BRITISH THOMSON-HOUSTON COMPANY LIMITED · RUGBY · ENGLAND
an A.E.I. Company A 5171



Lantern Lectures

In the series of lantern lectures prepared by London Transport, entertainment has been combined with information so that Londoners can learn something about London and its countryside, as well as the organisation and working of its transport system. It has been found, however, that these lectures are of very considerable interest to people who live in other parts of the country.

There are some 50 illustrations for each lecture and these are sent either as 3½ in. slides or on a 35 mm. film strip. There is no charge for the loan of the texts or of the slides or film strip; the only expense to the borrower is the return carriage of slides, or the return postage on the film strip.

You can choose from this list:

- | | |
|---------------------------------|------------------------------------|
| LONDON ON THE MOVE | SEEING LONDON BY NO. 11 BUS |
| THE STORY OF THE LONDON BUS | LONDON'S CITY |
| LONDON'S UNDERGROUND | WINDSOR AND HAMPTON COURT |
| BUILDING LONDON'S TUBE RAILWAYS | LUTON HOO |
| LONDON'S COUNTRYSIDE NORTH | ST. ALBANS AND HATFIELD HOUSE |
| LONDON'S COUNTRYSIDE SOUTH | LONDON AIRPORT |
| LONDON'S WEST END | THE NATURALIST IN LONDON'S COUNTRY |

Write for full details and an application form to
THE PUBLICITY OFFICE LONDON TRANSPORT
55 BROADWAY WESTMINSTER S.W.1. Telephone ABBey 5600 Ext. 407



IMPORTANT CONTRACTS

Special Buses for Edinburgh

AFTER extensive investigation to find an ideal single-deck bus for the city, Edinburgh Corporation Transport Department has ordered 50 Leyland Tiger Cub chassis with special equipment, including the new Leyland 110-b.h.p. O375 underfloor diesel engine driving through a centrifugal clutch and four-speed Pneumo-Cyclic gearbox. Edinburgh will be the second operator to use Pneumo-Cyclic equipped Tiger Cubs in this country, the first having been Lancaster shortly after the reduced ground clearance of these buses was regularised. It is claimed that the use of the centrifugal clutch, which permits two-pedal control, provides fuel consumption strictly comparable with that obtained with a normal clutch and gearbox. The Edinburgh chassis will have a wheel-base of 16 ft. 2 in. for overall length of 29 ft. 4 in. with overhang for a front entrance and air-operated 24-point automatic chassis lubrication.

South Wales Docks

The British Transport Commission (South Wales Docks) has placed the following contracts:
General Electric Co., Limited, for supply of electric light fittings for A and B sheds, King's Dock, Swansea.
G. Tate and Son, Limited, for construction of timber dolphin, north side of entrance channel, Port Talbot Docks.

Italian Locomotives for Argentine

Six Italian manufacturers have formed a consortium to handle an order from the Argentine Government for 280 diesel-electric locomotives for the State railway system. The order is said to be worth 28 million U.S. dollars. Orders have also gone to Argentinean manufacturers worth 1,000 million pesos, says a Government spokesman.

Scottish Region Contracts

The following contracts have been placed by the Scottish Region of British Railways:
Steele Engineering Products, Limited, Glasgow, for 11 mobile cranes for goods stations in the Scottish Region.
Foundry Equipment, Limited, Leighton Buzzard, for plant and equipment for new brass foundry, St. Rollox Works, Glasgow.
Alexander Lindsay, Limited, Glasgow, for electric lighting installation at Newton passenger station, yards and new power-operated signalbox for Glasgow suburban electrification.

U.S. Diesel Locomotives for S.A.R.

The General Electric Company has announced in New York that it has been awarded a contract for 115 diesel-electric locomotives by South African Railways and Harbours Administration. While the company said it did not yet know the amount of the contract, Mr. Ben J. Schoeman, Minister of Transport was reported in Johannesburg as saying the approximate cost would be \$28,000,000.

Diesel Scarabs for Wandsworth

Wandsworth Borough Council is to purchase 35 Scammell Scarab tractor units powered by Perkins P4 diesel engines and 35 articulated refuse collectors bodied by Glover, Webb and Liversidge, Limited. The order for the motive units has been placed through E. J. Baker (Dorking), Limited, and delivery is to commence in December and be completed by May. It is believed to be the largest single order for cleansing vehicles ever placed by a municipal authority.

Power Transformers for Electrification

The British Transport Commission has placed orders for a total of 39 power transformers required for British Railways electrification programmes in the Eastern and Scottish regions as follows:

Bruce Peebles and Co., Limited, Edinburgh, 5, for 17 units of 3.5 and 7.5 MVA capacity.
C. A. Parsons and Co., Limited, London, S.W.1, for eight units of 7.5 MVA capacity.
Hackbridge and Hewitt Electric Co., Limited, Walton-on-Thames, for nine units of 3 and 5 MVA capacity.
Crompton Parkinson, Limited, Hayes, Middlesex, for five units of 5 MVA capacity.

The transformers will be installed where supplies of alternating current have to be transformed by British Railways to either 6.25kV or 25kV for distribution to the overhead track equipment for Glasgow Suburban electrification in the Scottish Region and Fenchurch Street to Tilbury and Southend; Liverpool Street to Enfield, Chingford, Hertford East and Bishop's Stortford; and Liverpool Street to Chelmsford and Southend electrifications in the Eastern Region.

Pyrene Equipment in "Clan Maciver"

The m.v. *Clan Maciver*, owned by Clan Line Steamers, Limited, London, has been fitted with a Pyrene combined smoke detecting and CO₂ fire extinguishing installation. The installation incorporates a total of 83 80-lb. CO₂ cylinders for the protection of 18 cargo spaces on board the vessel. The engine room and boiler flat are protected by an extension of the cargo space installations, using the same battery of CO₂ cylinders. In conjunction with Ministry of Transport working party requirements, provision is made for portable use of the installation, when CO₂ gas from a number of cylinders in the main battery is ejected through a hose reel. Two Pyrene smoke detecting cabinets are fitted, one being a single-point master cabinet in the wheelhouse and the other an 18-point cabinet in the CO₂ cylinder room. Both are of the automatic pattern. The new steam tanker *Lincoln*, owned by the Federal Steam Navigation Co., Limited, London, is also fitted with a Pyrene mechanical foam fire extinguishing installation.

TENDERS INVITED

THE following items are extracted from the Board of Trade Special Register Service of Information. Inquiries should be addressed, quoting reference number where given, to the Export Services Branch, Board of Trade, Lacon House, Theobalds Road, London, W.C.1.

November 9—Iraq.—Posts and Telegraphs Directorate-General for the supply of VEHICLE TYRES. Photocopies of tender documents from Export Services Branch, B.O.T., price 4s. (ESB/25495/58.)

November 11—Union of South Africa.—South African Railways for one petrol-engined torque-converter FORK-LIFT TRUCK for 10,000 lb. lift at 24-in. centres. Photocopies of tender documents from Export Services Branch, B.O.T., price 7s. (ESB/26436/58.)

November 14—Union of South Africa.—Transvaal Provincial Administration for 10 heavy-duty diesel ARTICULATED PLANT CARRIERS for 60,000 lb. abnormal loads up to 6,000 ft. above sea level. Tenders to the Chairman, Transvaal Provincial Tender Board, P.O. Box 1040, Pretoria. (ESB/25600/58.)

November 17—Pakistan.—Ministry of Communications for 94 bogie covered GOODS WAGONS and 90 bogie high-sided open GOODS WAGONS, all for 5 ft. 6 in. gauge. Tenders to the Joint Director (Procurement and Development), Railway Division, Ministry of Communications, Room 302, Secretariat Building, Shahrah Kemal Ataturk, Karachi. (ESB/24222/58.)

November 17—Portuguese East Africa.—Ports, Railways and Transport Department for one mobile LOCOMOTIVE CLEANING PLANT. Photocopies of tender documents from Export Services Branch, B.O.T., price 1s. (ESB/23768/58.)

November 18—Portuguese East Africa.—Ports, Railways and Transport Department for 30 items of SPARES for LOCOMOTIVES (wheels and axles, bogies, cylinder blocks, connecting rods and so on). Photocopies of tender documents from Export Services Branch, B.O.T., price 5s. (ESB/23763/58.)

SHIPPING and SHIPBUILDING

Tanker Jetty at Southampton

APPROVAL has been given by Southampton Harbour Board to a proposal, submitted by engineering consultants on behalf of the Caltex group of companies, for a marine terminal for berthing oil tankers in Southampton Water. The terminal will consist of an L-shaped jetty, 1,000 ft. long, about three-quarters of a mile south of the mouth of the River Hamble. It will be connected to the shore by a trestle 3,300 ft. long. Approval of the jetty scheme takes a stage further the proposal for a second oil refinery in Southampton Water.

South African Cargo Line Planned

A SHIPPING company to own and operate a world-wide service of cargo ships is to be set up in South Africa, Sir Nicholas Cayzer, chairman of the Union Castle Line and of British and Commonwealth Shipping, stated in Cape Town last week. It will be known as Springbok Shipping and the aim would be to create a self-supporting unit which could be built up gradually as opportunity arose and through which his companies would identify themselves with the fortunes of South Africa.

More Frequent Rotterdam Service

ENTRY of the British Railways m.v. *Isle of Ely* into service this week enables the Eastern Region to increase the Harwich—Rotterdam service to three sailings a week in each direction. This is of special interest to those manufacturers who require a service which is fast and frequent to Dutch and other West European centres of trade and industry. The *Isle of Ely* has been designed so that she can deal equally well with a full load of general cargo, a full load of railway containers or, alternatively, a mixed load of containers and general cargo.

U.S. Flag to Mediterranean?

IT is reported that American Export Lines has asked the U.S. Government for an operating subsidy to enable it to become the first American flag carrier with a Great Lakes—Mediterranean cargo route. Chicago would be the western terminus of the new route, with regular calls at Milwaukee, Detroit, Cleveland, Toronto and Montreal. Regular calls would be made at Lisbon, Barcelona, Marseilles, Naples, Genoa, Casablanca and Seville on this side of the Atlantic. American Export Lines said that it planned to start the new service with one sailing every 21 days. It would use C-2 ships capable of 16½ knots.

Philippine Merchant Fleet

PRESIDENT GARCIA and officials of the National Development Company of the Philippines have agreed to build a big Philippine merchant marine fleet which would be underwritten by Japanese banks. These would grant the cash for the construction of oceangoing vessels and charge it to the \$90,000,000 loan in the reparations agreement between the two countries. The first phase of the enterprise will comprise 12 ships of about 10,000 tons which will have an aggregate cost of \$118,000,000, it is reported. Japanese bank underwriters are also said to have agreed on a seven-year deferred payment plan at a five per cent rate of interest.

Japanese Scrapping Plan

A GROUP of 13 owners has announced a plan to permit the Japanese shipping industry to scrap a total of 750,000 gross tons of obsolete ships to match the same amount of new construction over the next three years. One of the owners said the plan would be submitted to the Ministry of Transport and the Japanese Shipowners' Association, both of which had said they were in favour of the idea. The plan is related in some ways to another proposal made by shipowners in the Osaka-Kobe area earlier this year to lay up a total of 500,000 deadweight tons because of the recession in the freight market. Uneconomical vessels held by the Japanese shipping industry are at present estimated at 1,020,000 tons, of which 750,000 might be scrapped. To encourage owners to scrap this tonnage the Government should, it is suggested, rule that new construction under the official shipbuilding programme in the next three years be matched ton for ton by the scrapping of old ships. For this plan the Government should supply long-term low-interest loans from fiscal funds. They should bear a 4 per cent interest and be redeemable in 15 years after an initial waiting period of five years.

FINANCIAL RESULTS

NOTES on the trading results, dividends and financial provisions of companies associated with the transport industry are contained in this feature, together with details of share issues, acquisitions and company formations or reorganisations.

John. I. Thornycroft

For the year ended July 31, John I. Thornycroft and Co., Limited, shows consolidated trading profit of £413,207 (£26,760) which taxation reduces to £210,151 (£43,443). Transfer to reserve nil (£100,000) and general reserve nil (£246,123). Ordinary dividend is 7½ per cent for the year (12½ per cent), plus 1 per cent tax-free distribution from capital profits (nil).

Cunard Steam-Ship

For the first time since the war, the Cunard Steam-Ship Co., Limited, is to pass the interim ordinary dividend. Colonel Denis Bates, the chairman, states that the results of the year's operations of the group, as apparent to date, do not warrant it. Estimated results of passenger ships in the North Atlantic "show a satisfactory increase" on the previous year, but this has been more than outweighed by unfavourable results from cargo services.

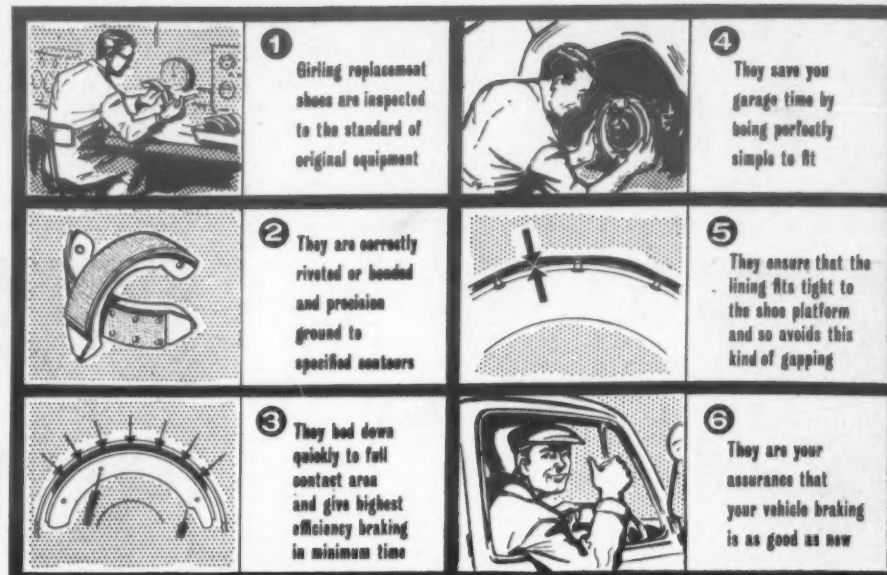
Dunlop Rubber

The Dunlop Rubber Co., Limited, announces that group net trading balance for the first six months of 1958, at £9.63 million, compares favourably with the results for the corresponding period of 1957 (£9.42 million) but mainly in consequence of an increase in the charge for depreciation the group profit, £5.53 million after all charges except taxation, is slightly lower. Interim dividend is 5d. per 10s. stock unit, or 4½ per cent (3.6d., or 3 per cent). It is unlikely that group profit for the second period will reach the record level achieved during July-December, 1957.

B.P.-Sinclair Oil Agreement

The British Petroleum Co., Limited, and the Sinclair Oil Corporation in the United States have agreed in principle to a substantial joint programme of development and marketing. The programme is based on the fact that the current interests of the two groups are complementary. B.P. interests as both producer and seller of oil products lie primarily in the Eastern Hemisphere, whereas Sinclair Oil has similar interests in the Western Hemisphere.

The programme consists of three projects. In the first place B.P. will obtain a long-term contract to cover Sinclair's requirements of Middle East crude oil: these will be supplied from the Persian Gulf area. Secondly, the two groups will establish a jointly owned company primarily to market in the Western Hemisphere both Middle East and Venezuelan oil. Finally, a jointly owned company will be set up for the main purpose of exploration and production in Latin America.

6 GOOD REASONS
FOR FITTING GIRLING
REPLACEMENT SHOES

Don't reline—replace with
GIRLING FACTORY LINED
REPLACEMENT BRAKE SHOES

GIRLING
THE BEST BRAKES IN THE WORLD

GIRLING LIMITED · KINGS ROAD · TYSELEY · BIRMINGHAM 11

Builders of ROAD TANKS for over

30
YEARS

Butterfields' No. 1 Works is Britain's Number One Factory for Road Tank Production

At the Butterfield No. 1 Works at Shipley there is one manufacturing shop 300ft. long by 120ft. wide occupied solely on the production of Road Transport Tanks, Refuellers etc. in Stainless Steel, Mild Steel, Aluminium, Nickel or any alloy. This is complete production under one roof.

To ensure the continued quality of our workmanship we have recently installed Weld X-Ray, mechanical testing and metallurgical laboratories, all of which are employed to maintain the highest standard of production. We also have high vacuum testing facilities and are equipped to undertake *Epikote lining to customers' requirements.

*EPIKOTE
is the
TRADE MARK
of the
Shell
Chemical
Co. Ltd.

Butterfield

W. F. Butterfield Ltd.
P.O. Box 38 Shipley, Yorks.
Telephone: 52344 (8 lines)
BRANCHES
LONDON Tel. BULLHORN 2450 (4 lines)
BIRMINGHAM Tel. EAS 0071 & EAS 2243
BRISTOL Tel. 27905
LIVERPOOL Tel. CENTRAL 0829
MANCHESTER Tel. BLA 44100 & 44117
NEWCASTLE-ON-TYNE Tel. 23852
GLASGOW Tel. CENTRAL 7496
BELFAST N.I. Tel. 57343
DUBLIN Tel. 73475 & 79746